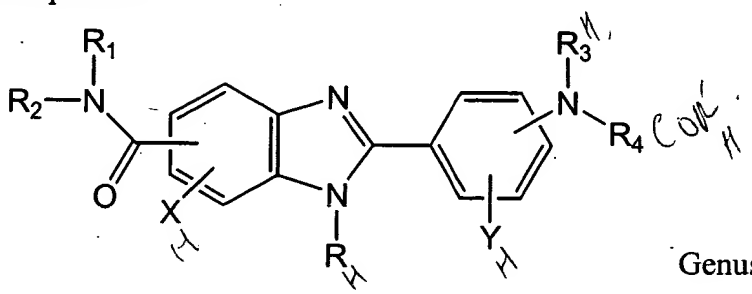
AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A pharmaceutical composition for treating or preventing an allergic reaction associated with increased IgE levels in a mammal comprising any one or more of the following compounds:



Genus I;

wherein R is selected from the group consisting of H, C_1-C_5 alkyl, benzyl, p-fluorobenzyl and di-alkylamino alkyl, wherein said C_1-C_5 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl;

wherein R_1 and R_2 are independently selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatic groups, substituted polycyclic aliphatic groups, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur;

wherein R_3 and R_4 are independently selected from the group consisting of H, alkyl, aryl, heteroaryl and COR′;

wherein R′ is selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatics, substituted polycyclic aliphatics, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur; ~~wherein R′ is not haloalkyl;~~

wherein the substituent on R_1, R_2, and R′ is selected from the group consisting of H, halogens, polyhalogens, alkoxy group, substituted alkoxy, alkyl, substituted alkyl,

dialkylaminoalkyl, hydroxyalkyl, carbonyl, OH, OCH_3, COOH, OCOR', COOR', COR', CN, CF_3, OCF_3, NO_2, ~~NR'R',~~ NHCOR' and CONR'R';

wherein X and Y are independently selected from the group consisting of H, halogens, alkoxy, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, OH, ~~OCOR'',~~ OCOR', OCH_3, COOH, CN, CF_3, OCF_3, NO_2, COOR'', CHO and COR''; and

wherein R'' is a C_1-C_8 alkyl, wherein said C_1-C_8 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl;

wherein at least one of R_1, R_2, R_3, or R_4 is not H.

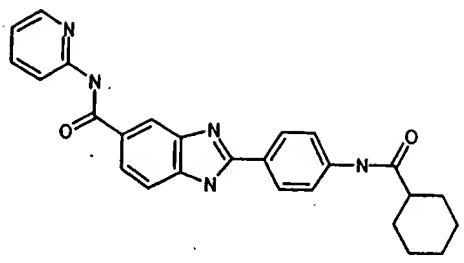
2. **(Original)** The compound of Claim 1, wherein said polycyclic aliphatic group is selected from the group consisting of adamantyl, bicycloheptyl, camphoryl, bicyclo[2,2,2]octanyl and norbornyl.
3. **(Canceled)**
4. **(Canceled)**
5. **(Original)** A method for treating or preventing an allergic reaction in a mammal wherein said reaction is caused by an increase in IgE levels comprising administering an IgE-suppressing amount of at least one compound of Claim 1.

Claims 6-11 **(Canceled)**

12. **(Original)** A method for treating or preventing asthma in a mammal comprising administering an IgE-suppressing amount of at least one compound of Claim 1.

Claims 13-25 **(Canceled)**

26. **(Previously Amended)** The pharmaceutical composition of Claim 1, wherein the compound is selected from the group consisting of:



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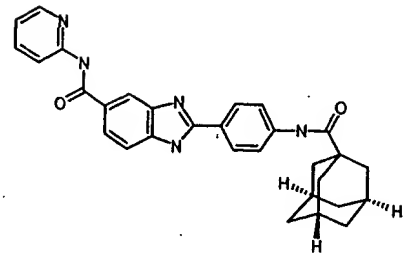

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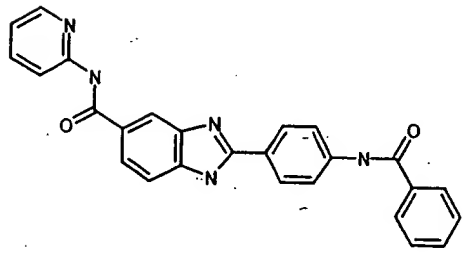

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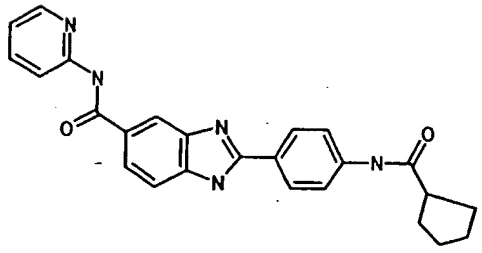

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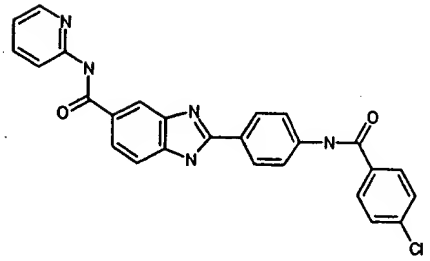

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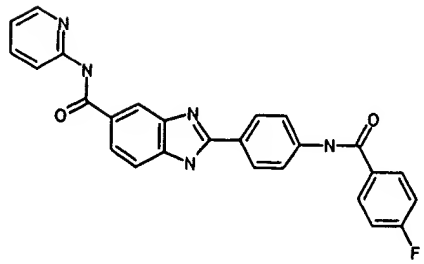

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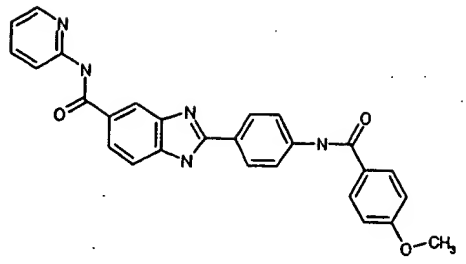

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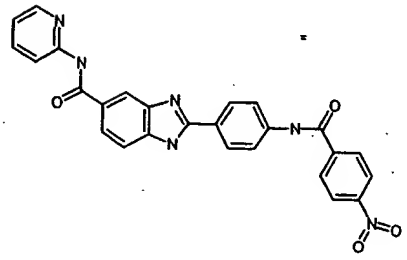

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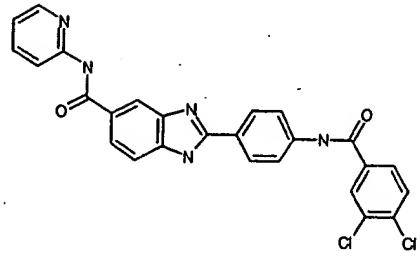

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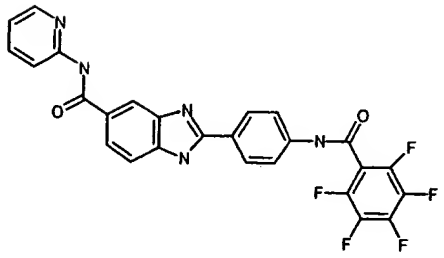

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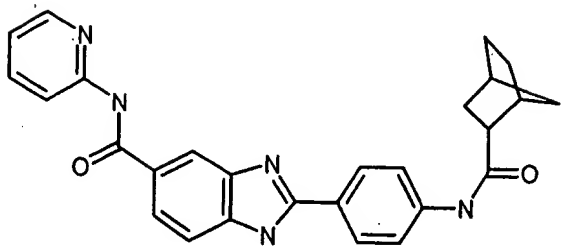

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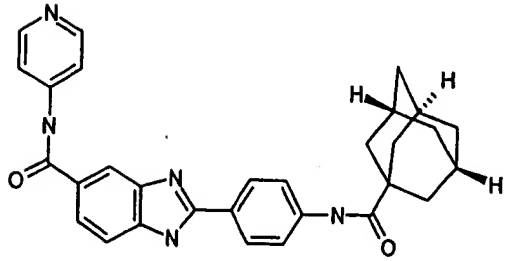

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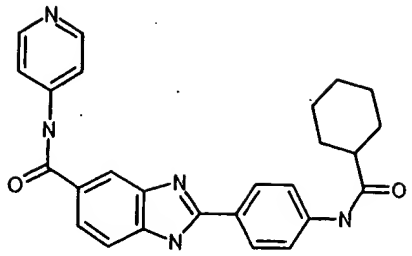

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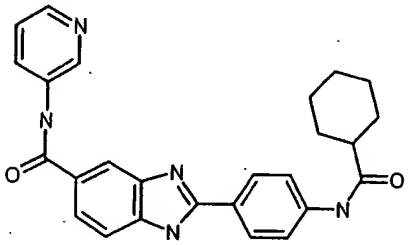

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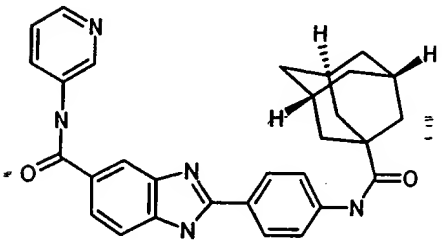

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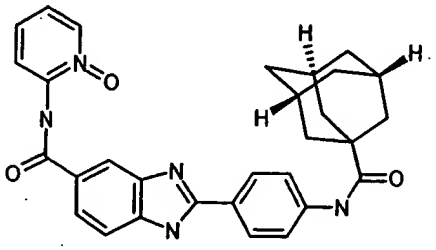

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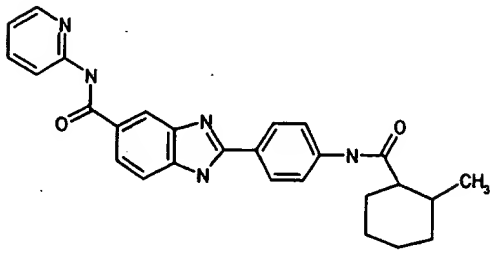

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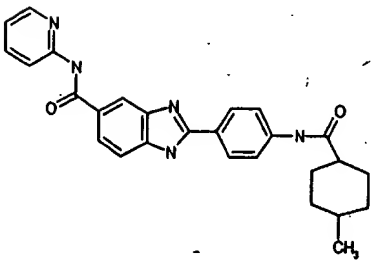

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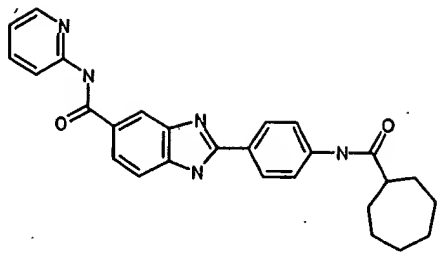

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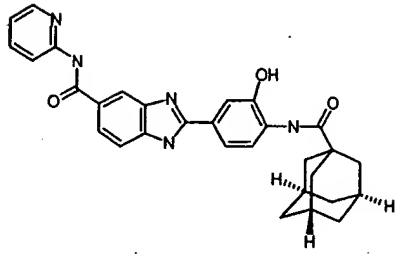

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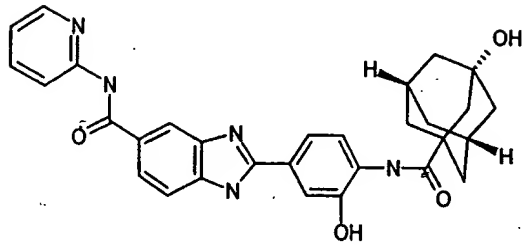

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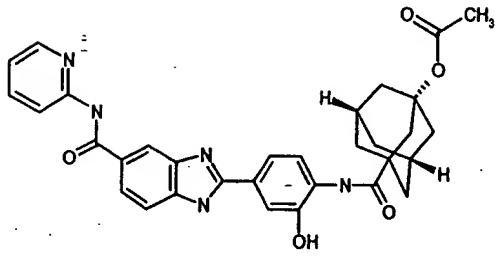

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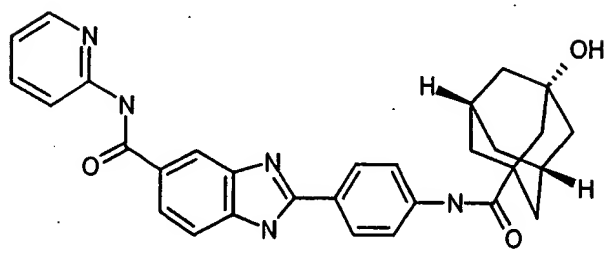

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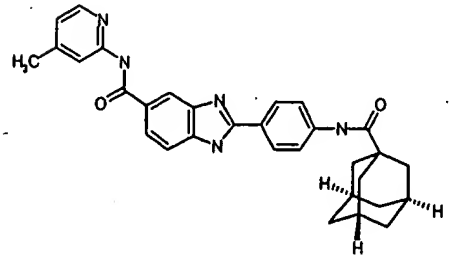

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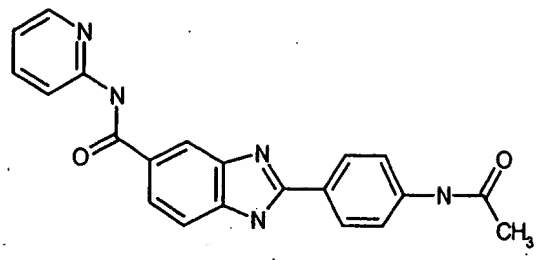

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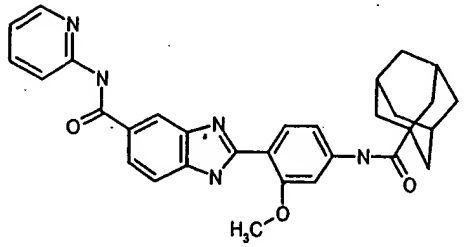

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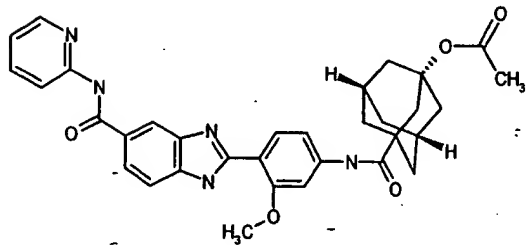

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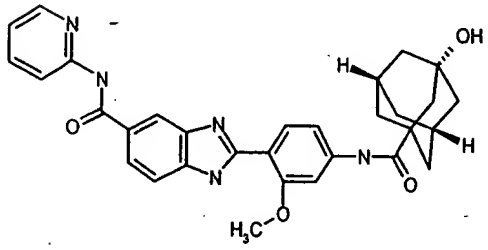

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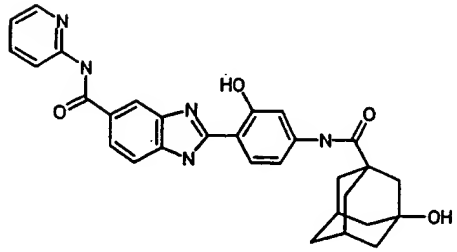

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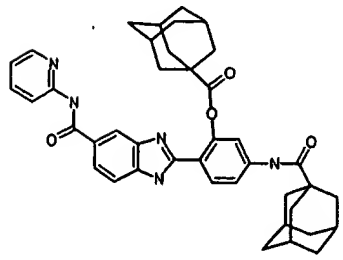

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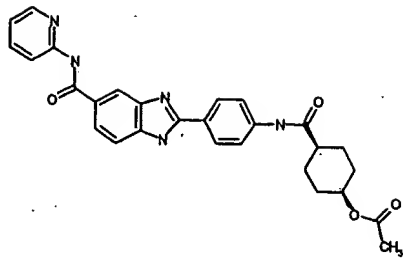

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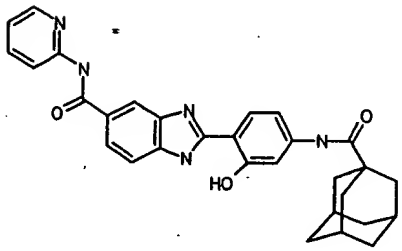

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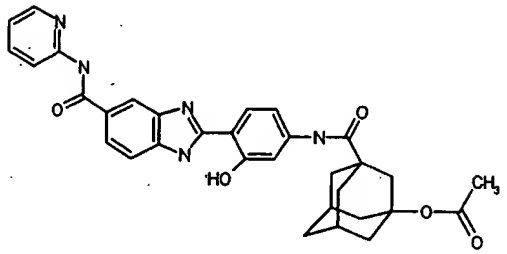

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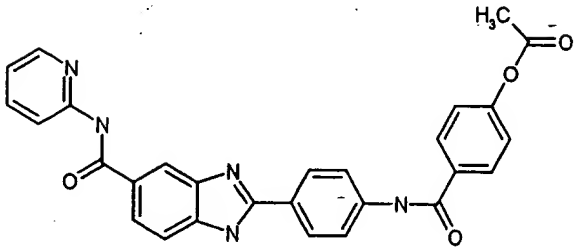

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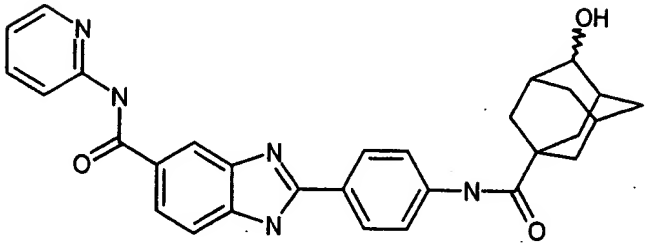

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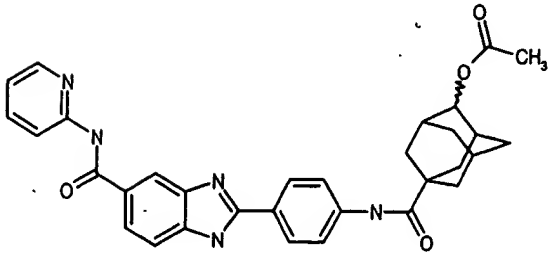

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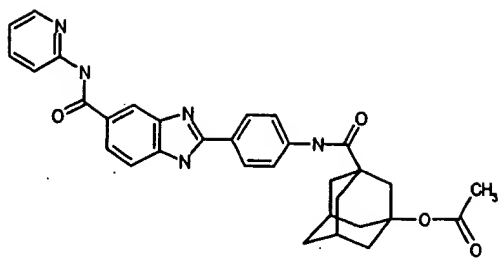

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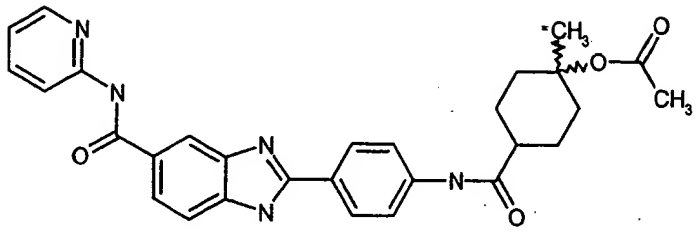

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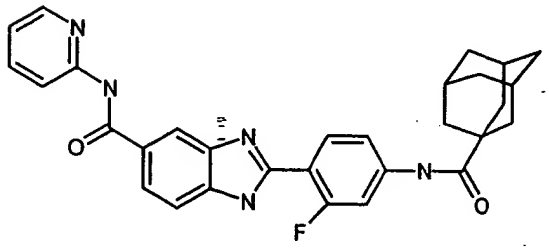

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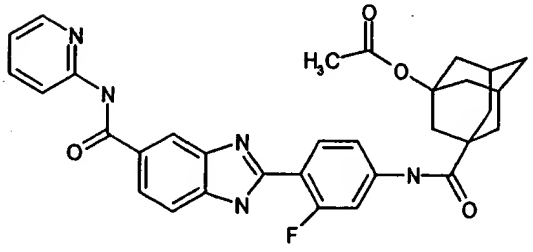

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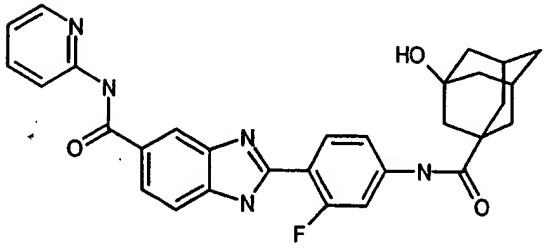

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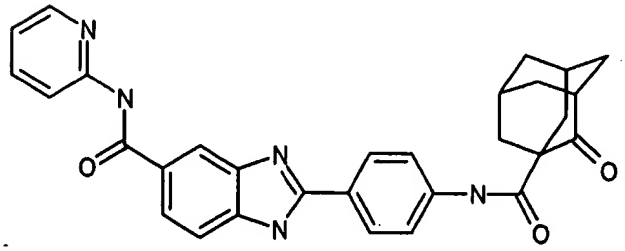

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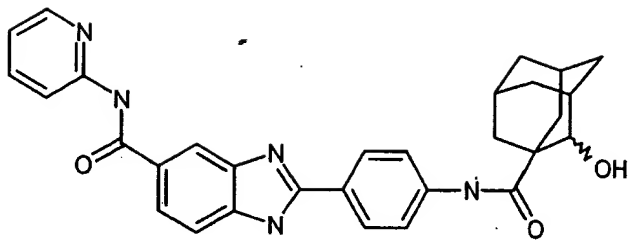
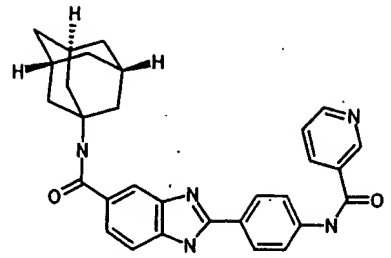


I.192

27. (Original) The pharmaceutical composition of Claim 1, wherein the compound is selected from the group consisting of:



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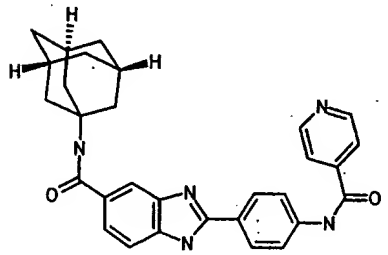

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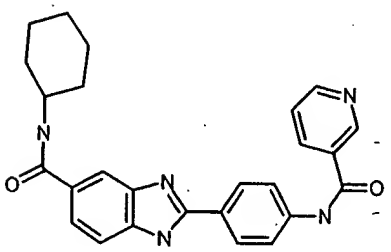

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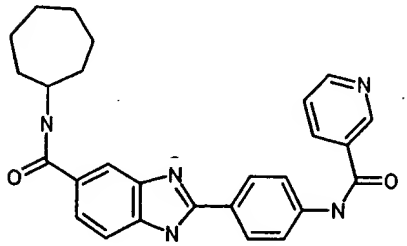

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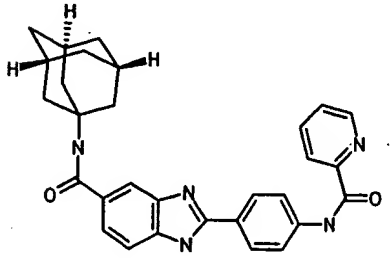

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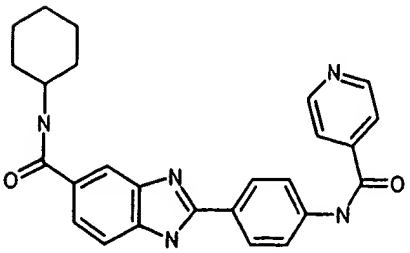

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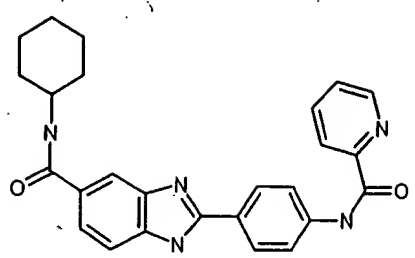

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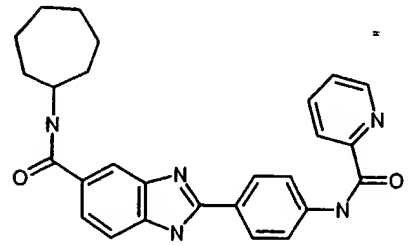
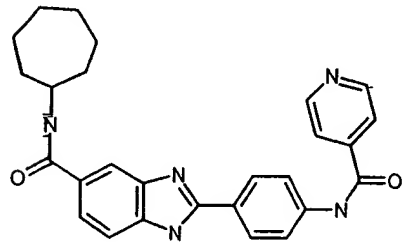
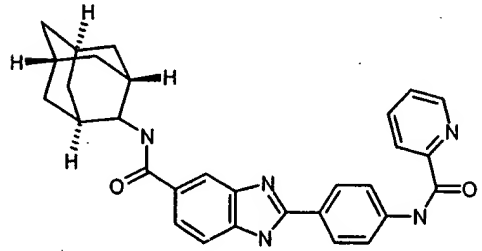


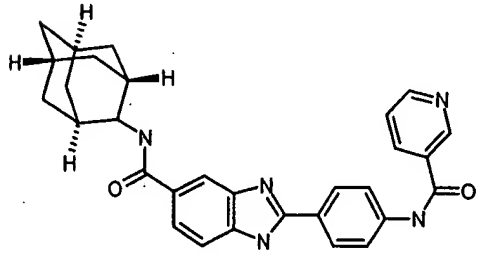
I.159



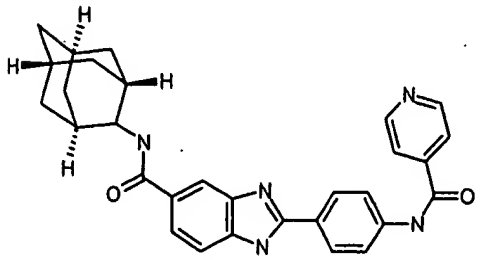
I.160



I.166

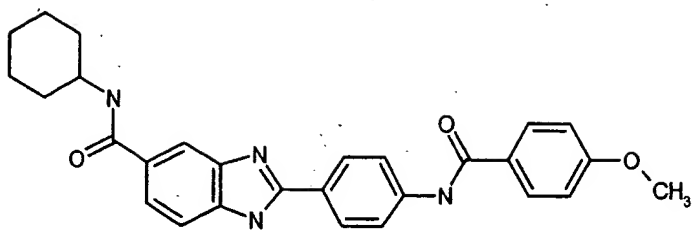


I.167

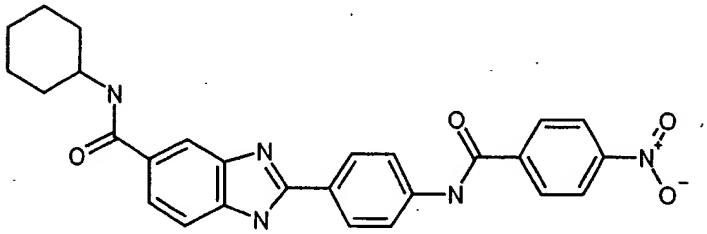


I.168

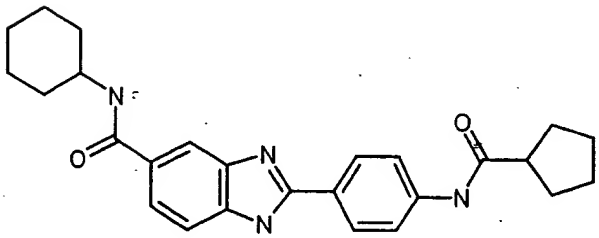
28. (Original) The pharmaceutical composition of Claim 1, wherein the compound is selected from the group consisting of:



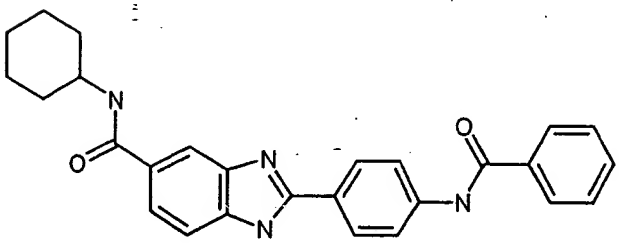
I.1



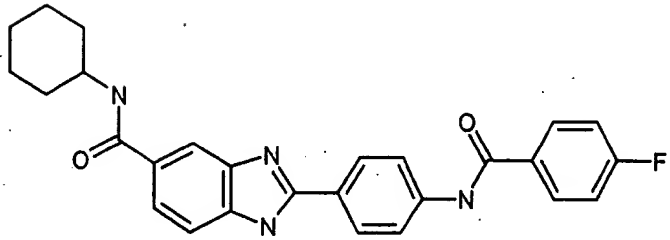
I.2



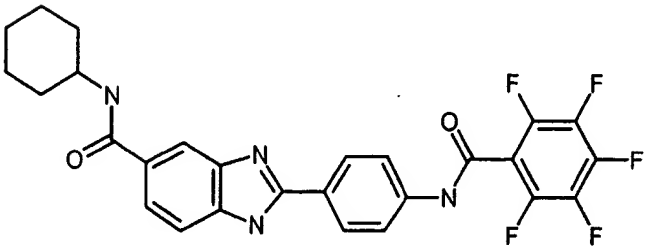
I.3



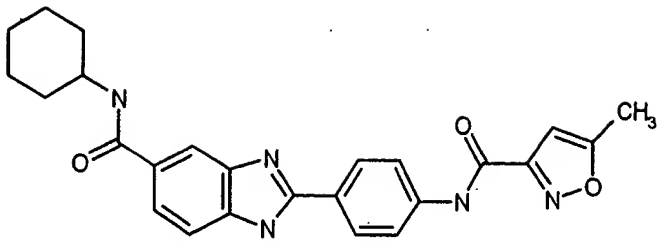
I.4



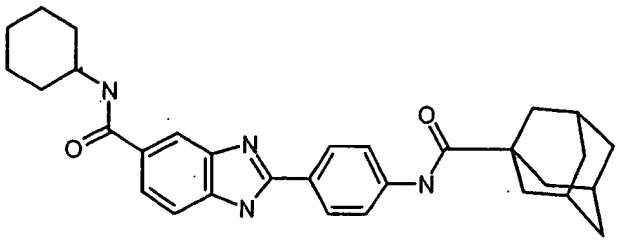
I.5



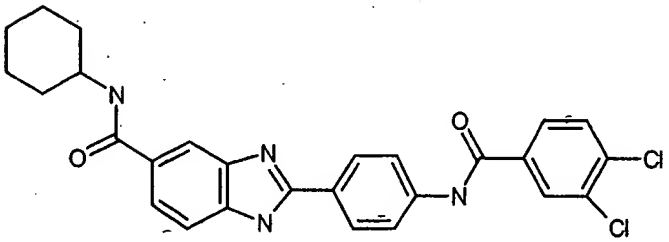
I.6



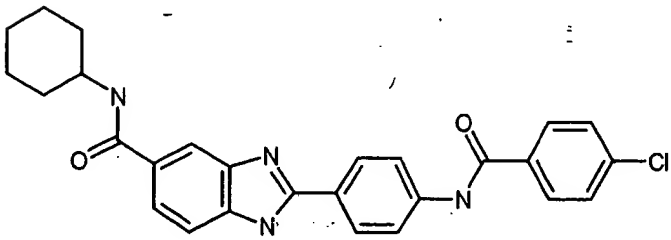
I.7



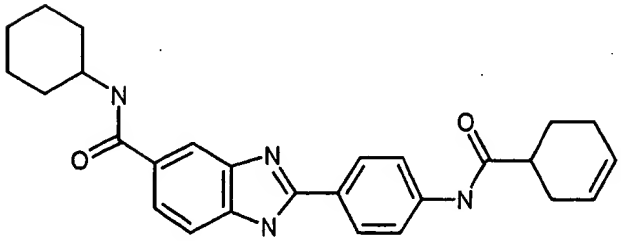
I.8



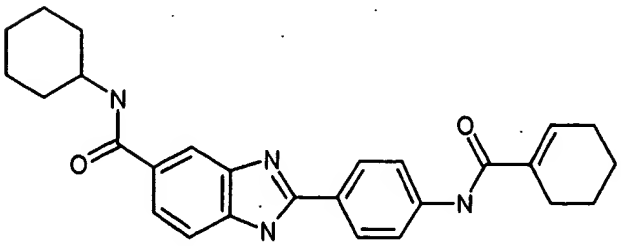
I.9



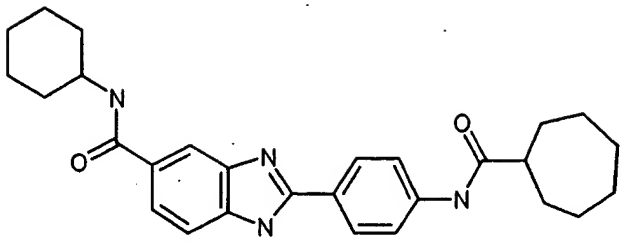
I.10



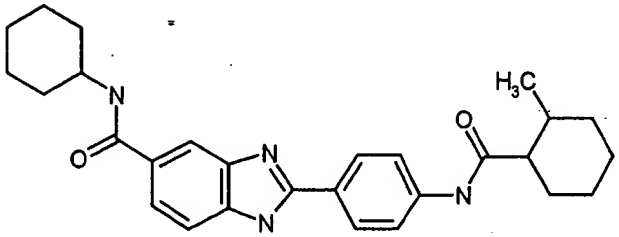
I.11



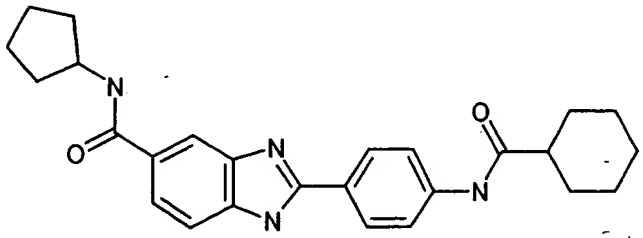
I.12



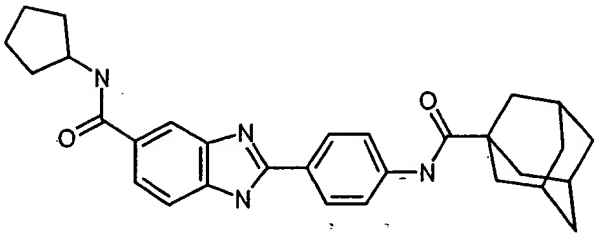
I.13



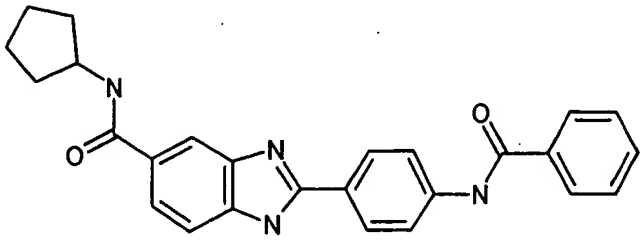
I.14



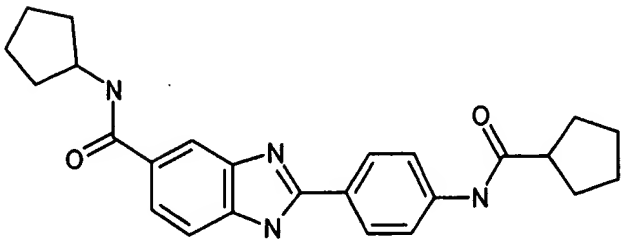
I.15



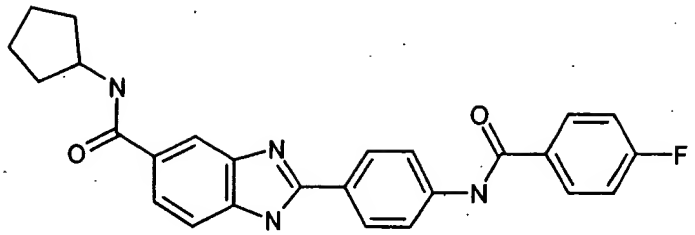
I.16



I.17



I.18



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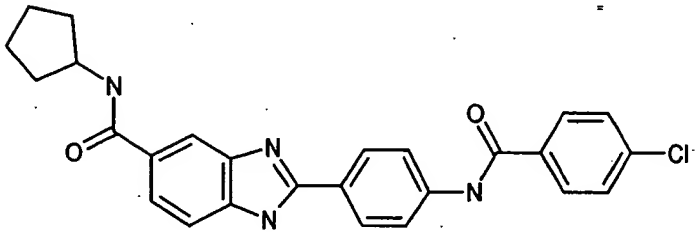

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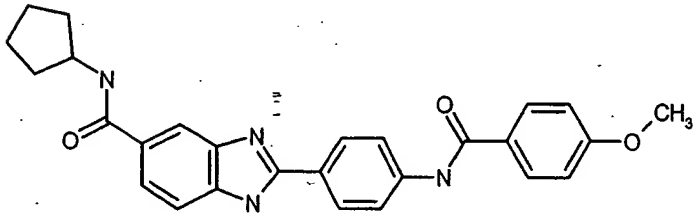

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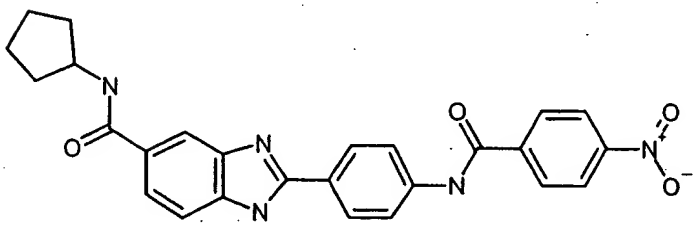

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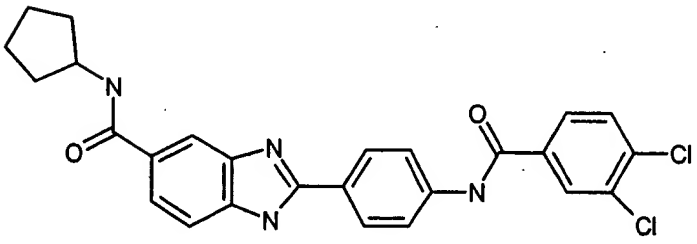

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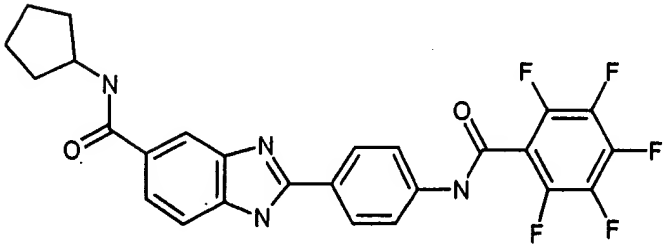

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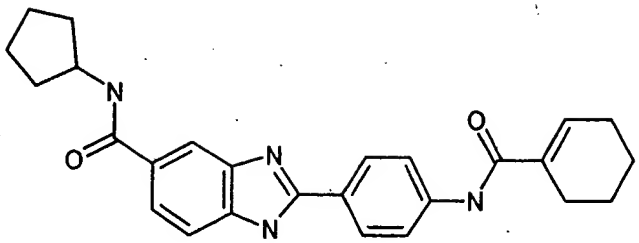

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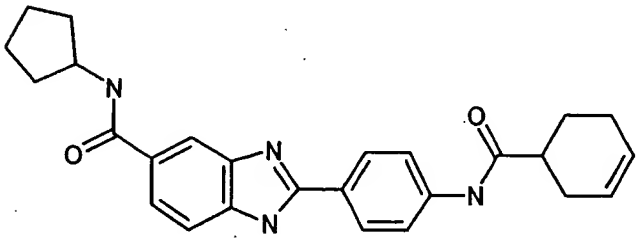

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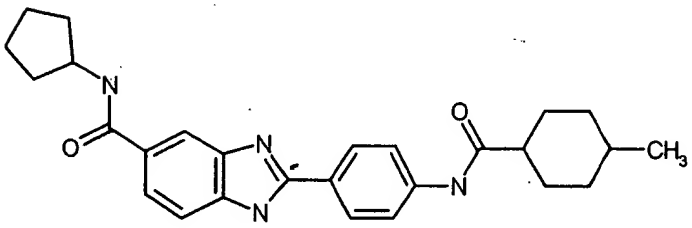

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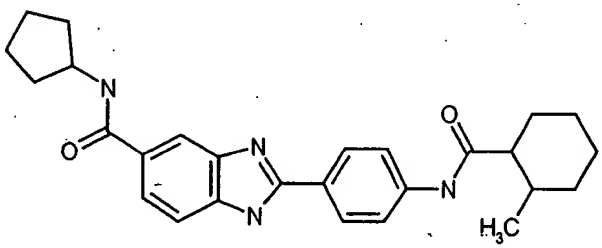

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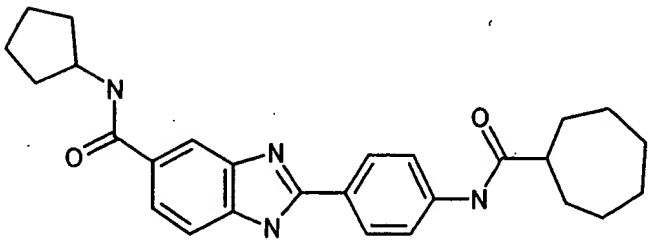

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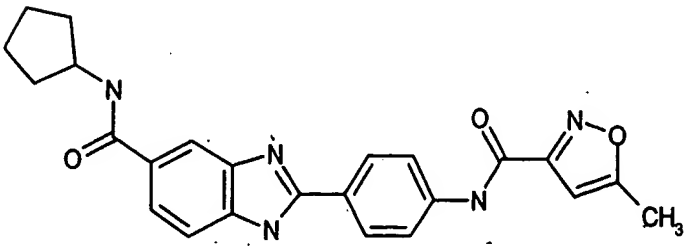

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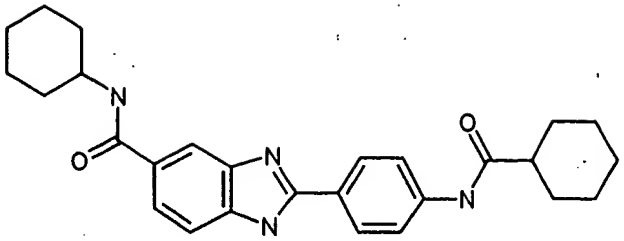
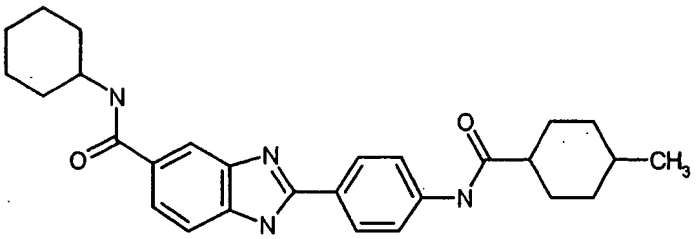
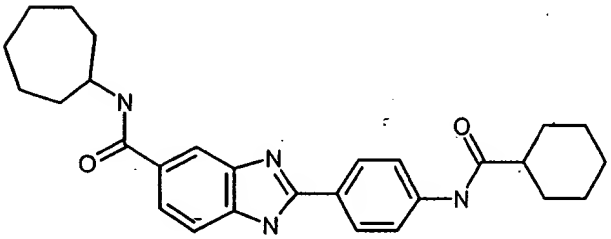


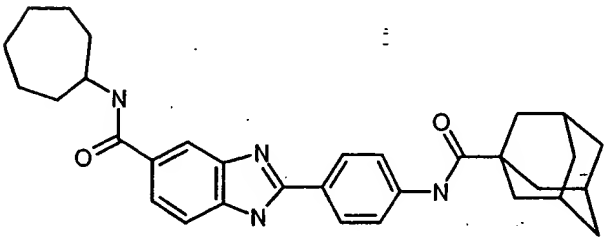
I.31



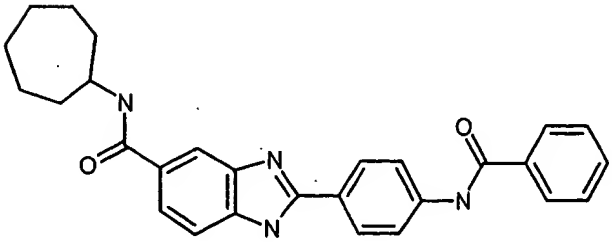
I.32



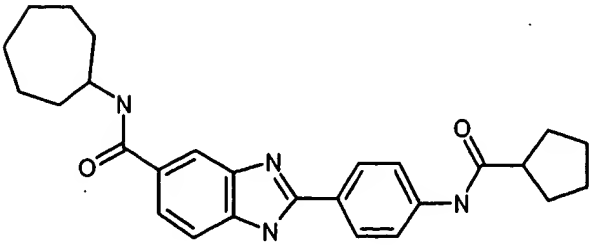
I.33



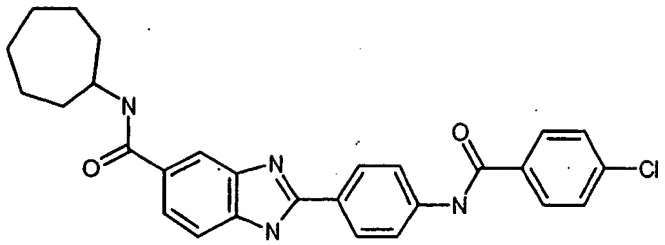
I.34



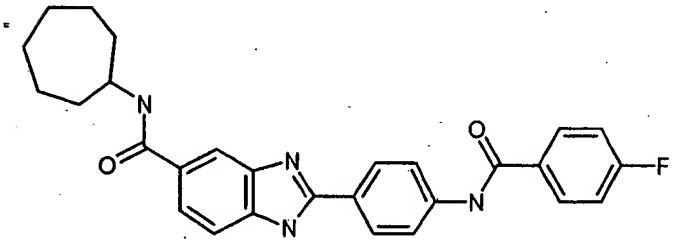
I.35



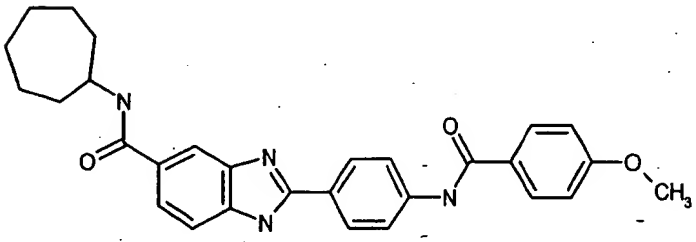
I.36



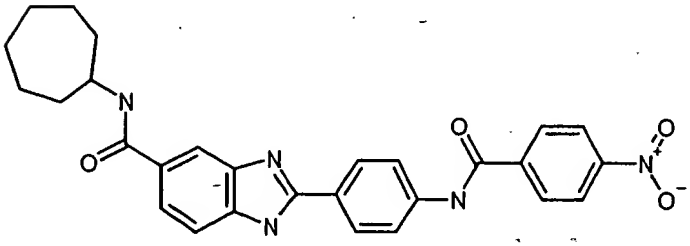
I.37



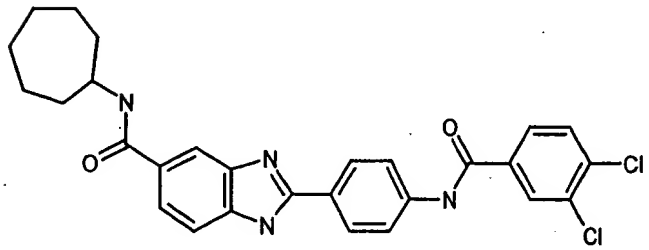
I.38



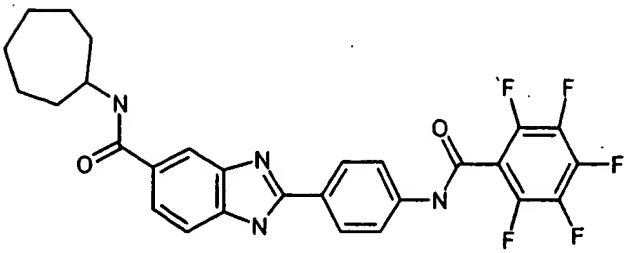
I.39



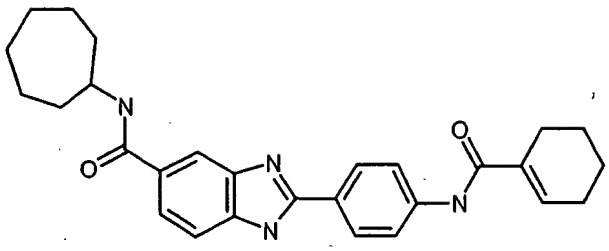
I.40



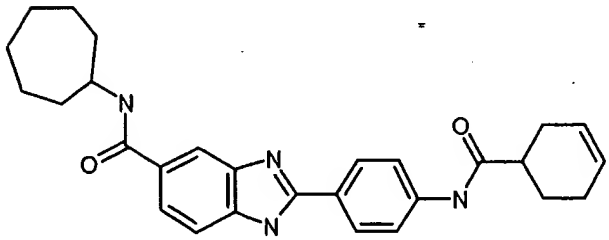
I.41



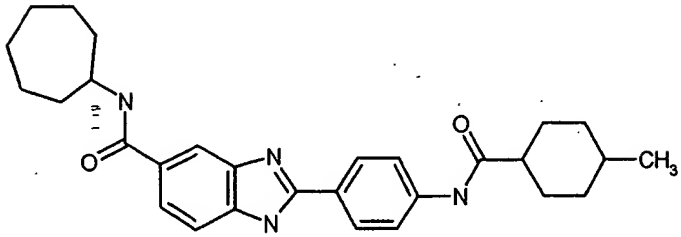
I.42



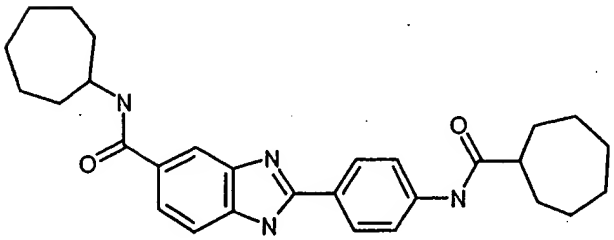
I.43



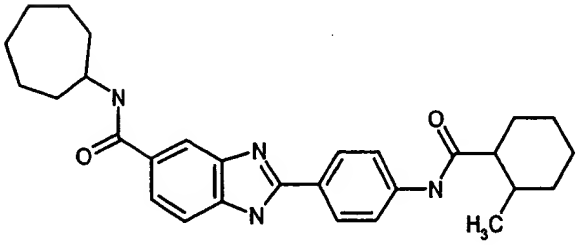
I.44



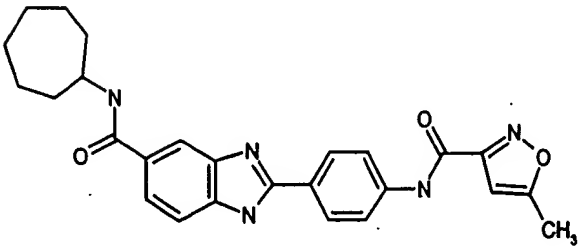
I.45



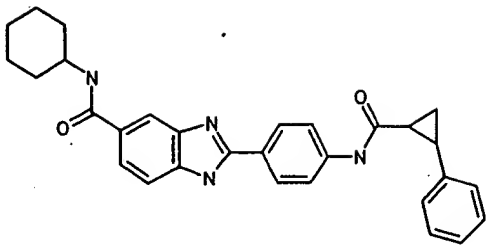
I.46



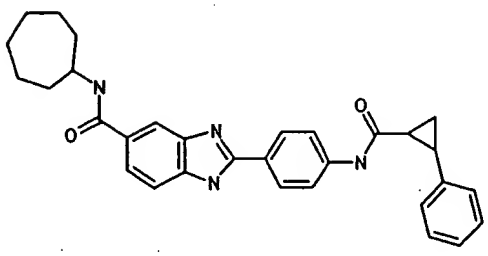
I.47



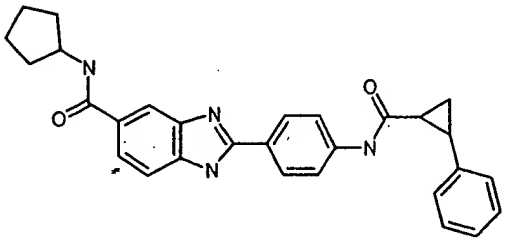
I.48



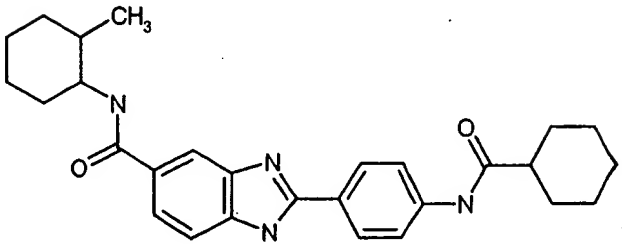
I.49



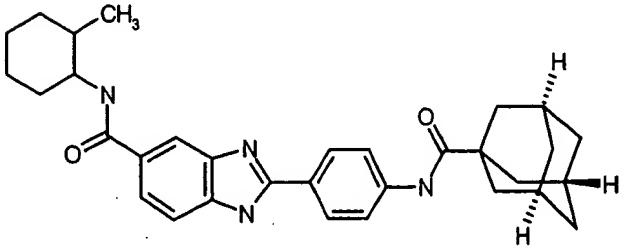
I.50



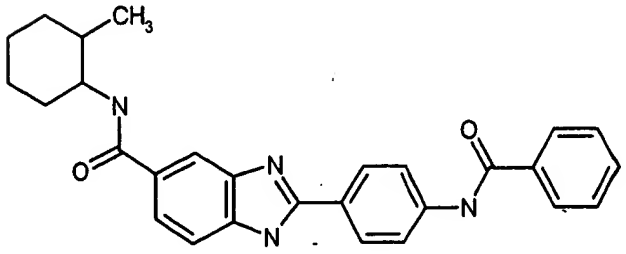
I.51



I.52



I.53



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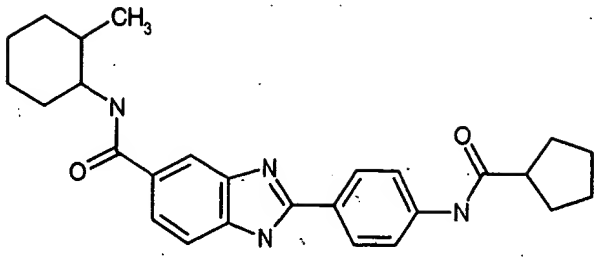

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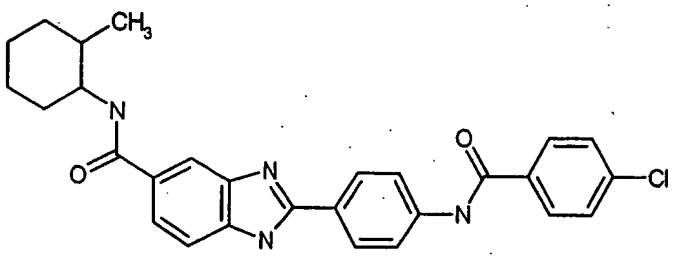

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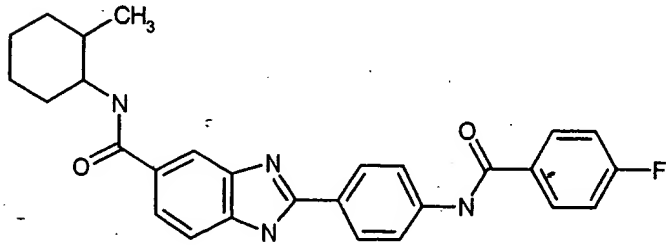

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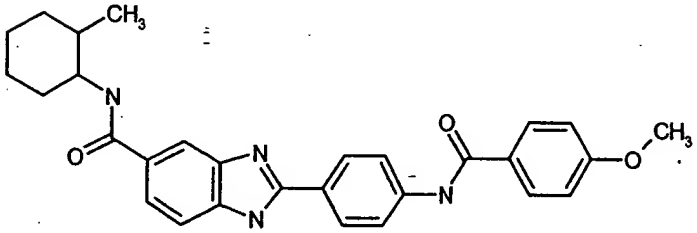

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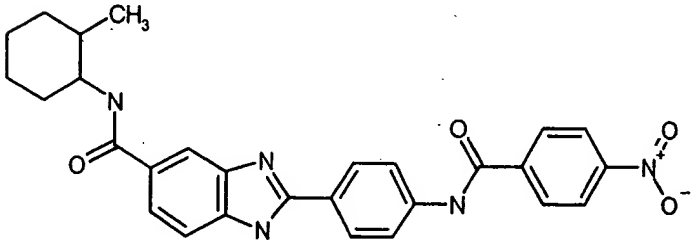

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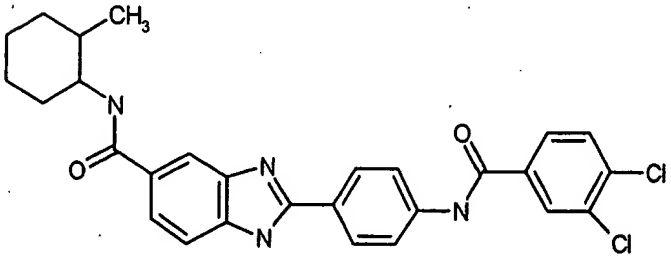

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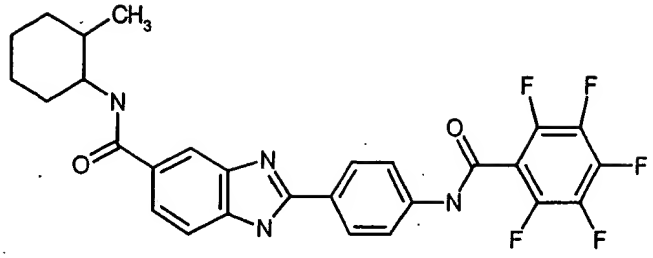

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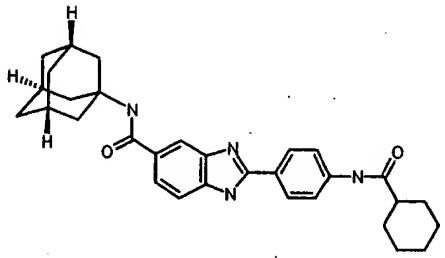

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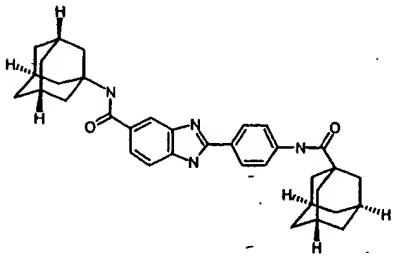

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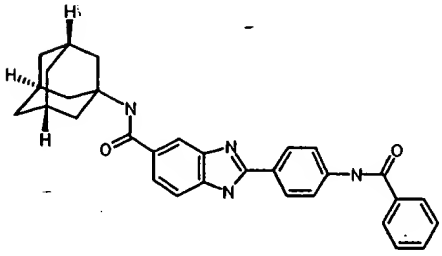

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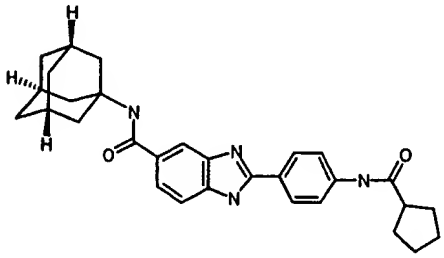

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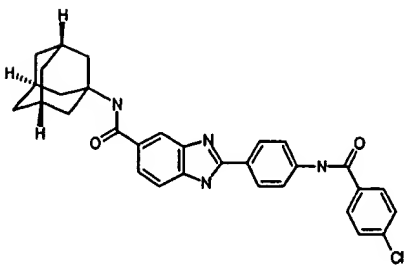

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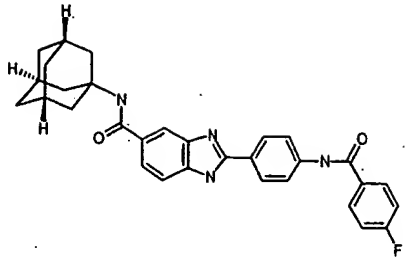

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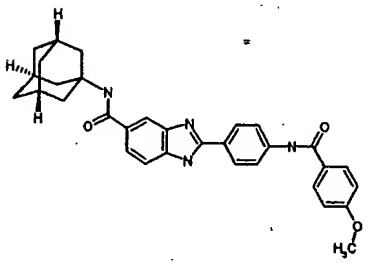

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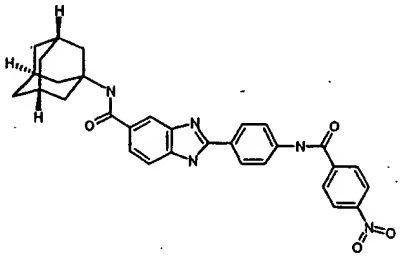

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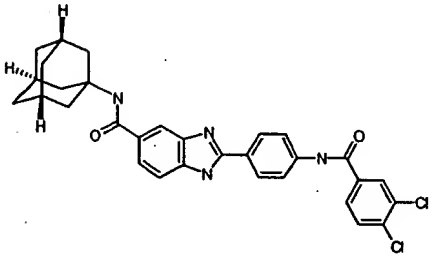

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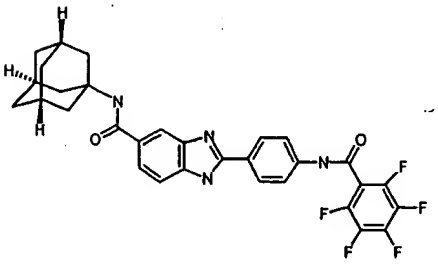

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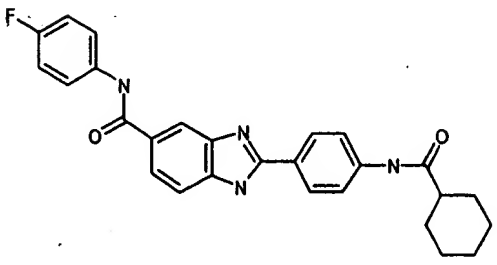

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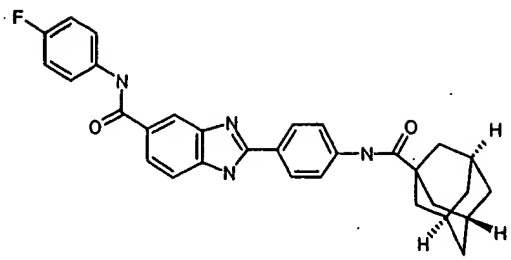

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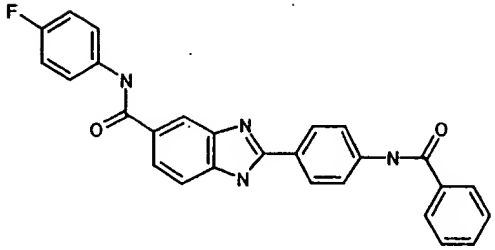

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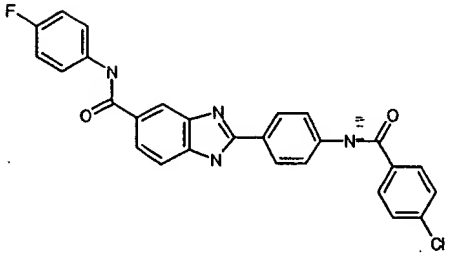

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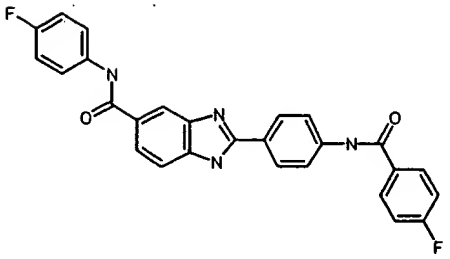

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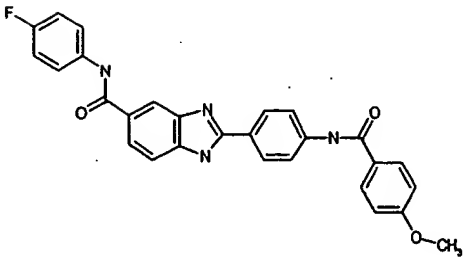

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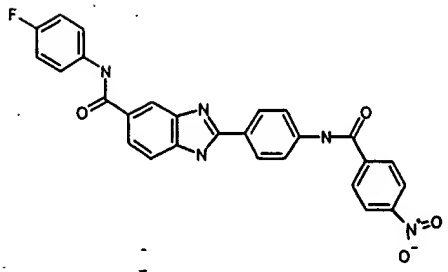

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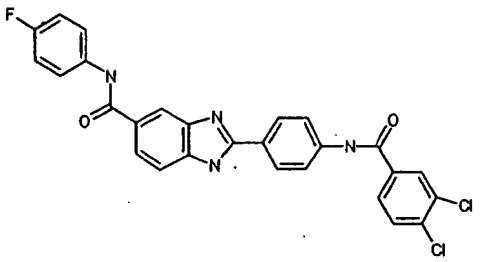

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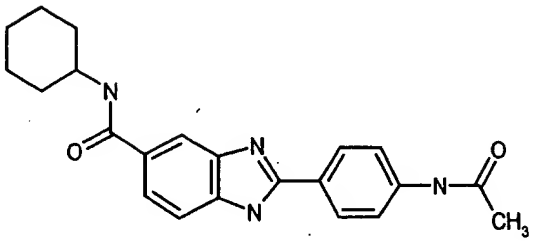

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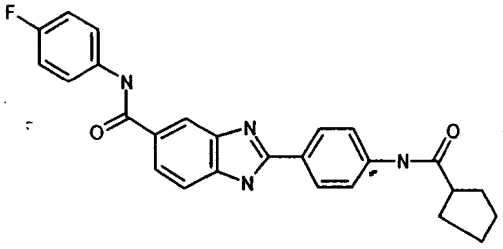

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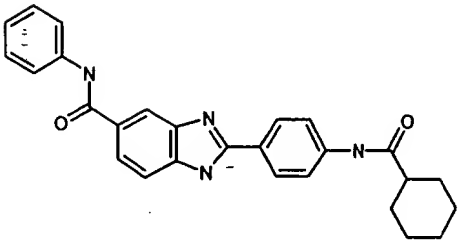

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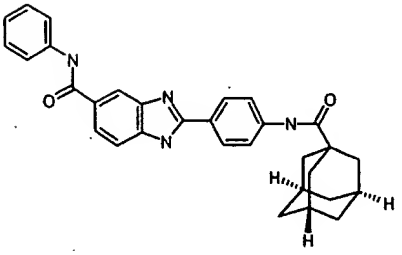

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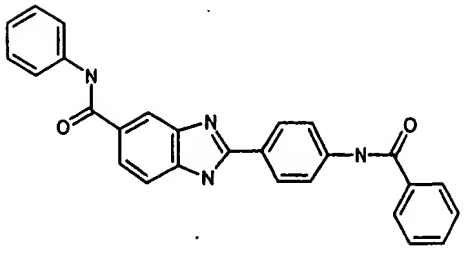

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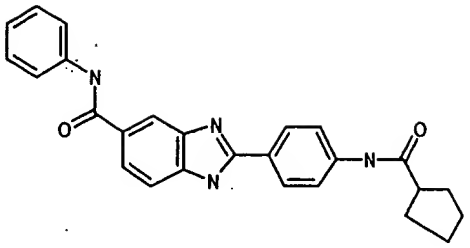

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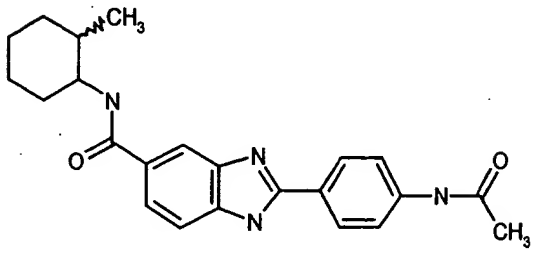

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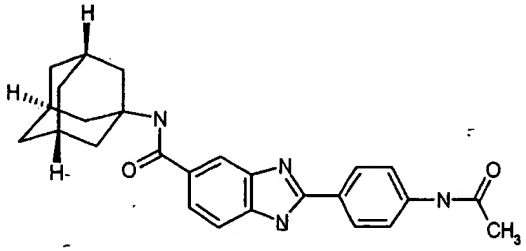

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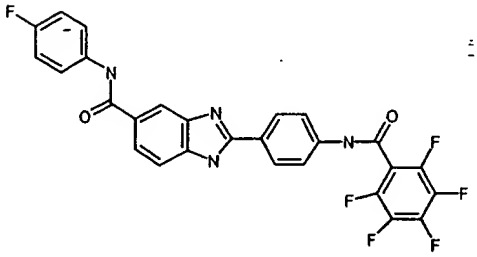

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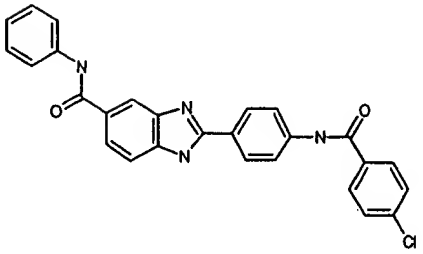

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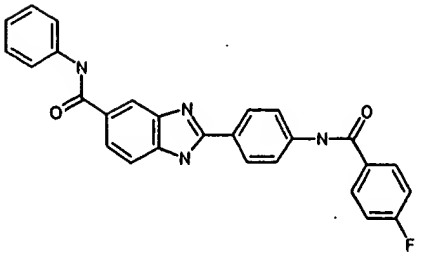

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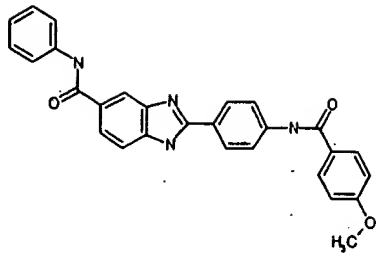

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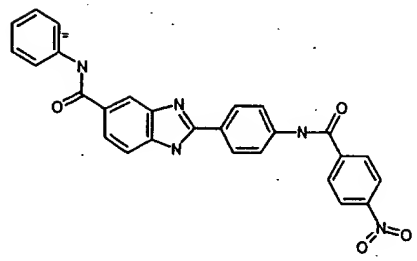

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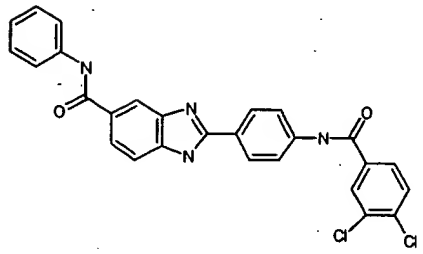

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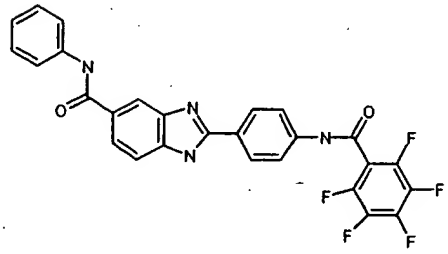

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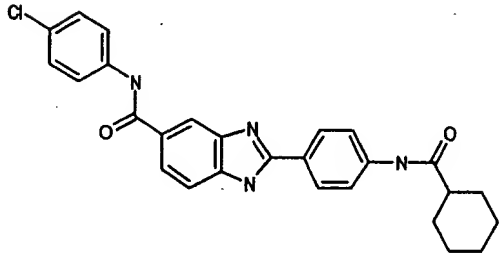

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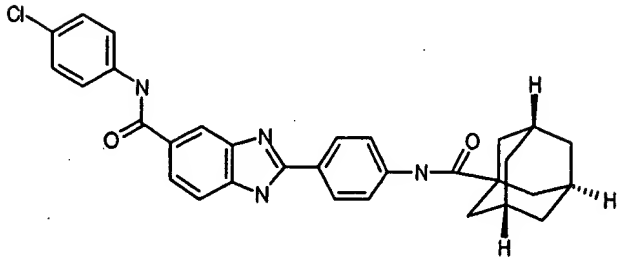

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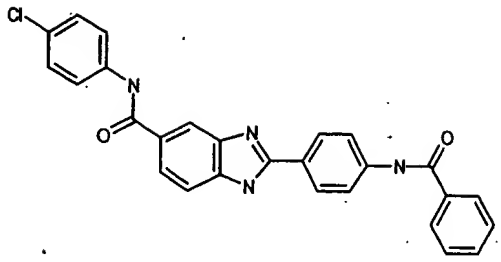
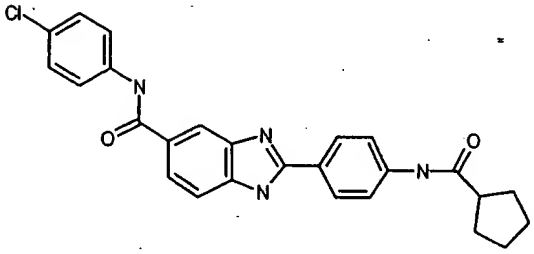
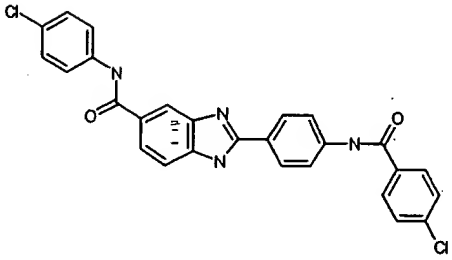


I.107



I.108



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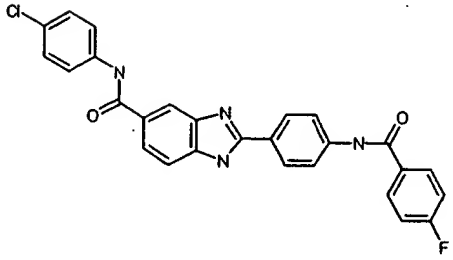

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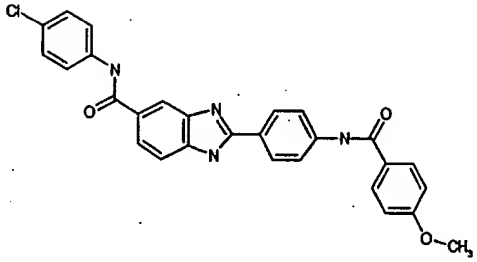

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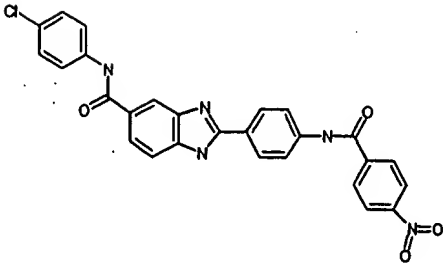

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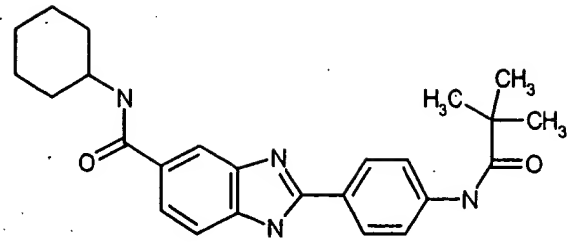
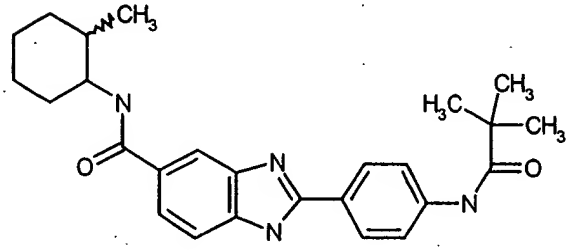
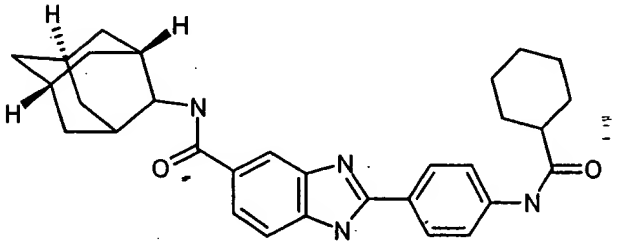


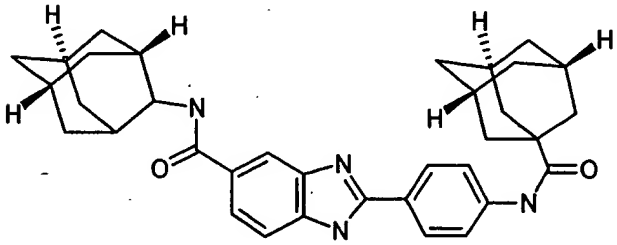
I.113



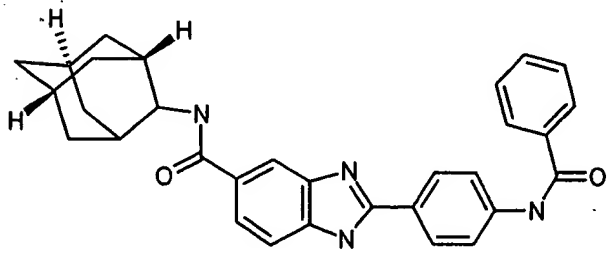
I.114



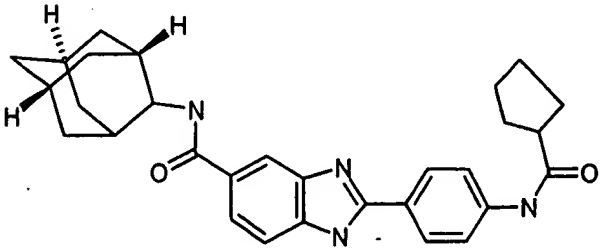
I.115



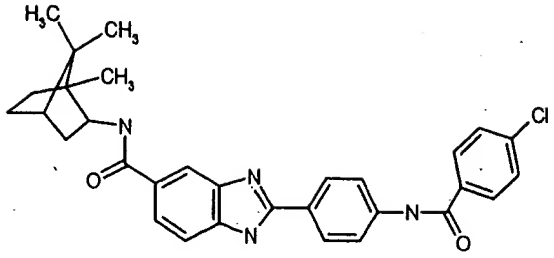
I.116



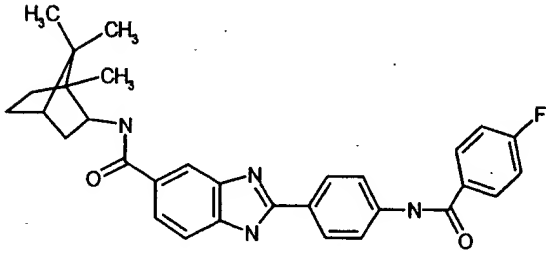
I.117



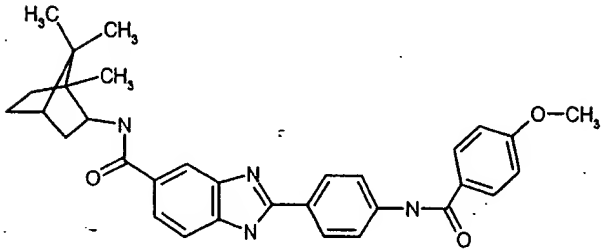
I.118



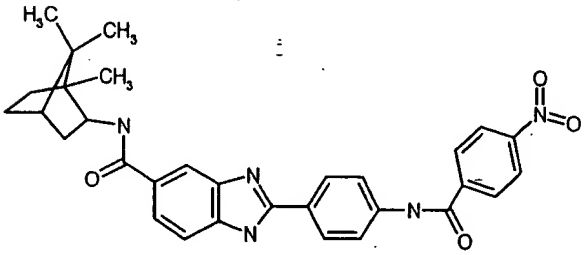
I.119



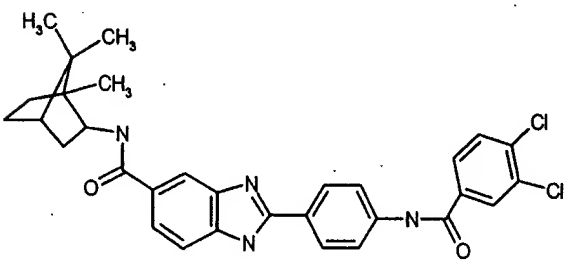
I.120



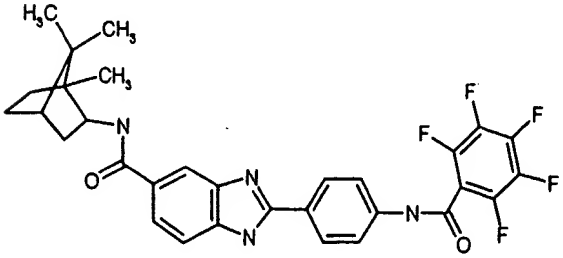
I.121



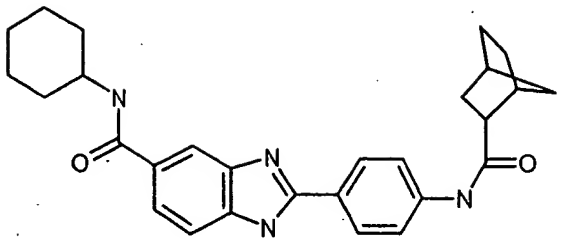
I.122



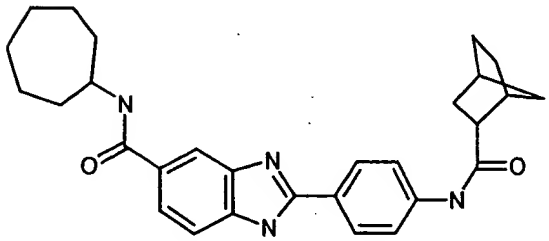
I.123



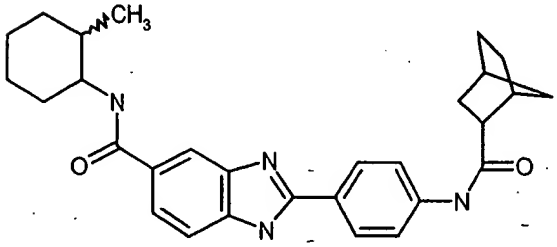
I.124



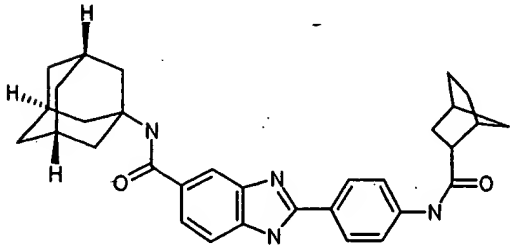
I.125



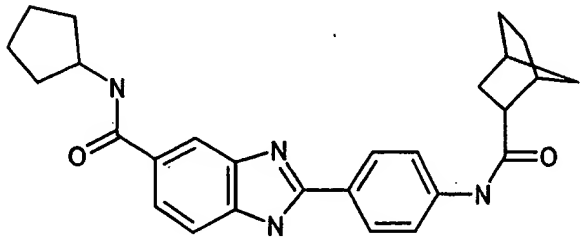
I.126



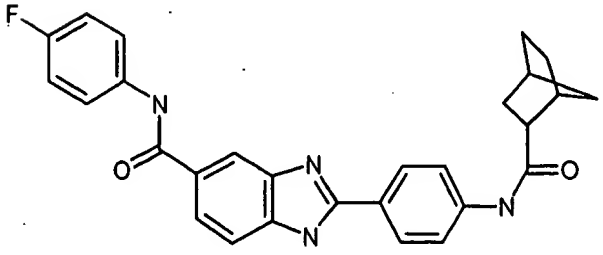
I.127



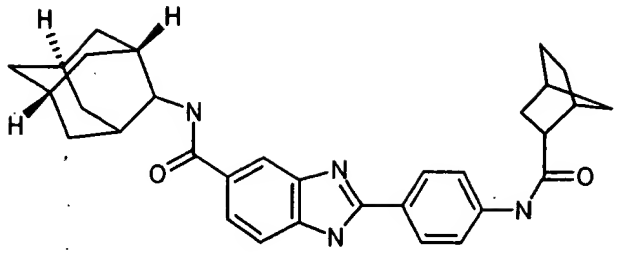
I.128



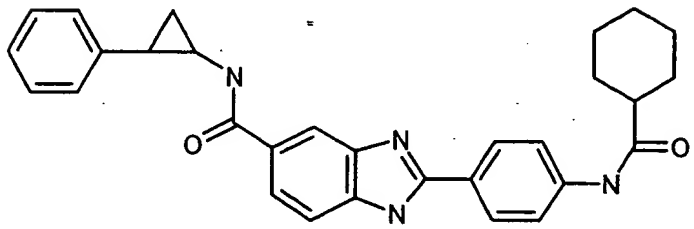
I.129



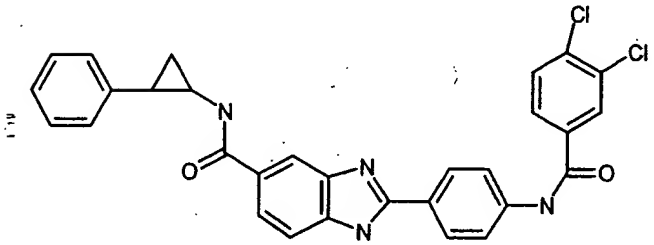
I.130



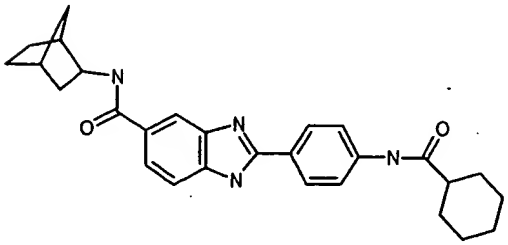
I.132



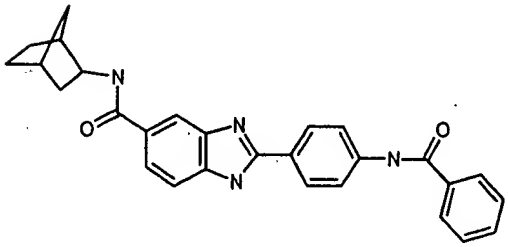
I.133



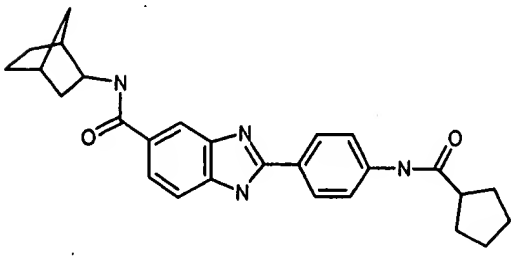
I.134



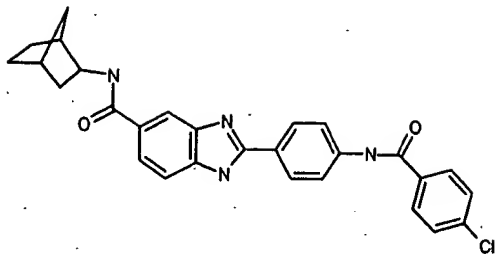
I.135



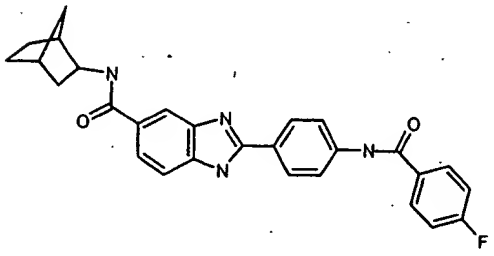
I.136



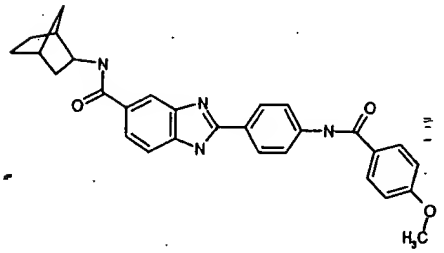
I.137



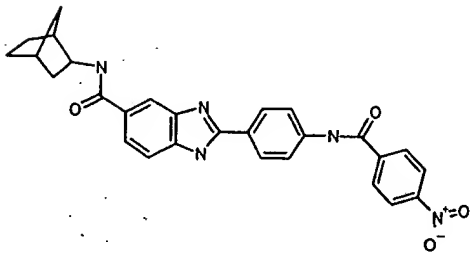
I.138



I.139



I.140



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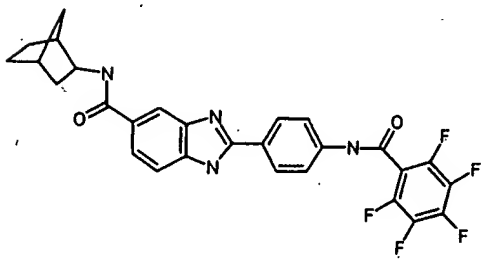
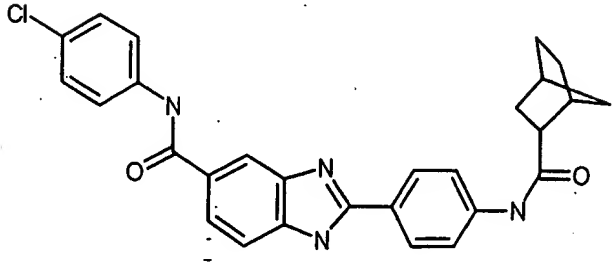
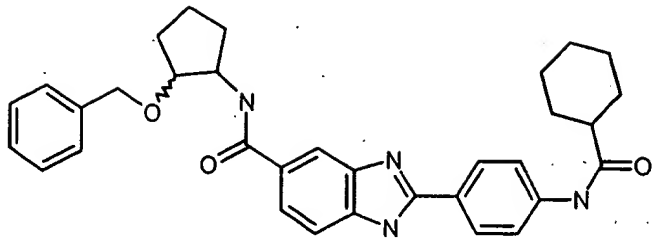


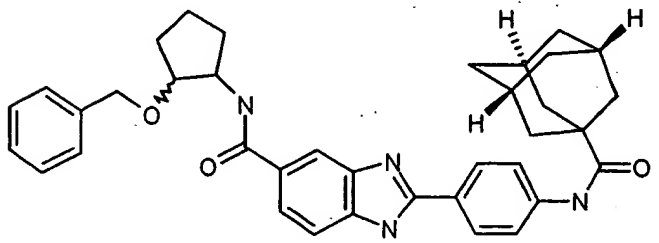
I.142



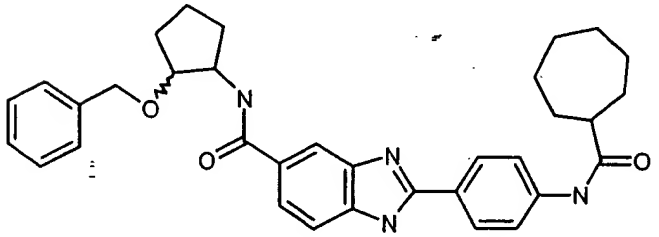
I.143



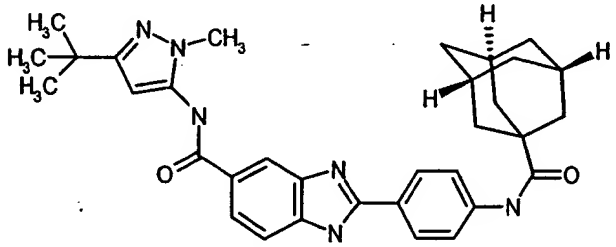
I.144



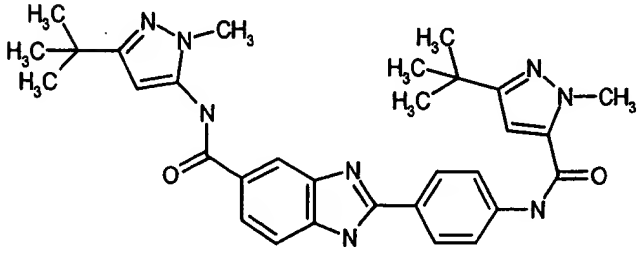
I.145



I.146



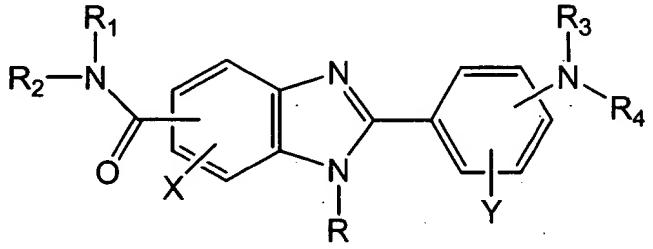
I.161



I.162

Claims 29-34 **(Canceled)**

35. **(Original)** A method of preparing a compound or salt thereof having the formula:



Genus I;

wherein R is selected from the group consisting of C_1-C_5 alkyl, benzyl, p-fluorobenzyl and di-alkylamino alkyl, wherein said C_1-C_5 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl,

wherein R_1 and R_2 are independently selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatic groups, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur,

wherein said substituted phenyl, substituted naphthyl and substituted heteroaryl contain 1-3 substituents, wherein said substituent is selected from the group consisting of H, halogens, polyhalogens, alkoxy group, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, OH, OCH_3, COOH, COOR′ COR′, CN, CF_3, OCF_3, NO_2, NR′R′, NHCOR′ and CONR′R′,

wherein R_3 and R_4 are independently selected from the group consisting of H, alkyl, aryl, heteroaryl and COR′,

wherein R′ is selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatics, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur,

wherein X and Y are independently selected from the group consisting of H, halogens, alkoxy, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, OH, OCH_3, COOH, CN, CF_3, OCF_3, NO_2, COOR'', CHO and COR'',

wherein R'' is a C_1-C_8 alkyl, wherein said C_1-C_8 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl,

wherein said method comprises:

reacting a 3,4-diaminobenzoic acid with a 4-nitrobenzaldehyde to yield a first intermediate or salt thereof;

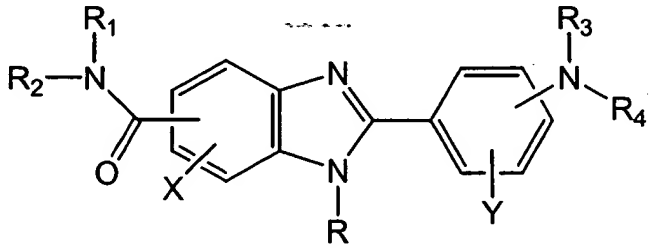
aminating said first intermediate or salt thereof to yield a second intermediate or salt thereof;

reducing said second intermediate or salt thereof to yield a third intermediate or salt thereof; and

acylating said third intermediate or salt thereof to obtain said compound or salt thereof.

Claims 36-37 **(Canceled)**

38. **(Currently Amended)** A pharmaceutical composition for treating or preventing an allergic reaction associated with increased IgE levels in a mammal comprising any one or more of the following compounds:



~~Genus I;~~

wherein R is selected from the group consisting of H, C_1-C_5 alkyl, benzyl, p-fluorobenzyl and di-alkylamino alkyl, wherein said C_1-C_5 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl;

wherein R_1 and R_2 are independently selected from the group consisting of H, pyridyl, substituted pyridyl, and pyridyl-N-oxide;

wherein R_3 and R_4 are independently selected from the group consisting of H and COR′; wherein R′ is selected from the group consisting of adamantyl and substituted adamantyl;

wherein substituents on substituted adamantyl and substituted pyridyl are independently selected from the group consisting of H, halogens, polyhalogens, alkoxy group, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, carbonyl, OH, OCH_3, COOH, OCOR′′, COOR′′ COR′′, CN, CF_3, OCF_3, NO_2, NR′′R′′, NHCOR′′ and CONR′′R′′;

wherein R′′ is selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatics, substituted polycyclic aliphatics, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur;

wherein X and Y are independently selected from the group consisting of H, halogens, alkoxy, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, OH, OCOR′′′, OCH_3, COOH, CN, CF_3, OCF_3, NO_2, COOR′′′, CHO and COR′′′; and

wherein R′′′ is a C_1-C_8 alkyl, wherein said C_1-C_8 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl.

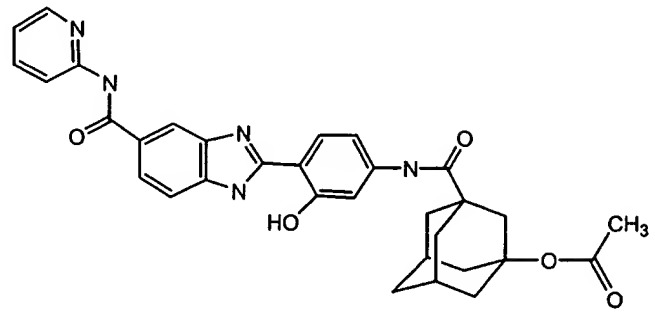
39. **(Previously Added)** A method for treating or preventing an allergic reaction in a mammal wherein said reaction is caused by an increase in IgE levels comprising administering an IgE-suppressing amount of at least one compound of Claim 38.

40. **(Previously Added)** A method for treating or preventing asthma in a mammal comprising administering an IgE-suppressing amount of at least one compound of Claim 38.

41. **(Canceled)**

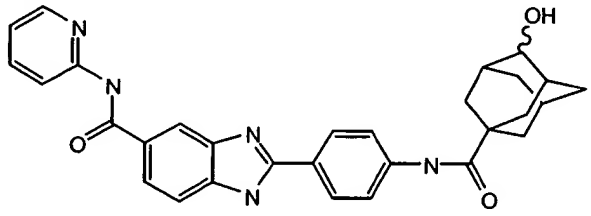
42. **(Previously Added)** The pharmaceutical composition of Claim 38, wherein the compound is selected from the group consisting of:

43. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



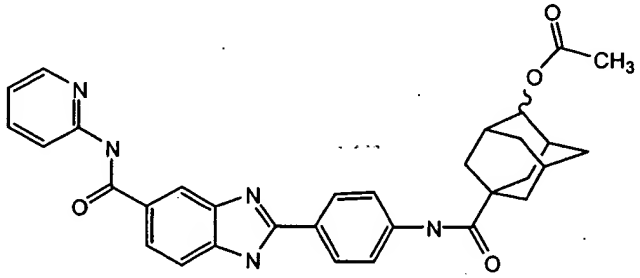
I.182

44. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



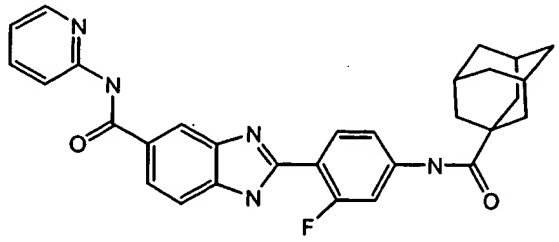
I.184

45. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



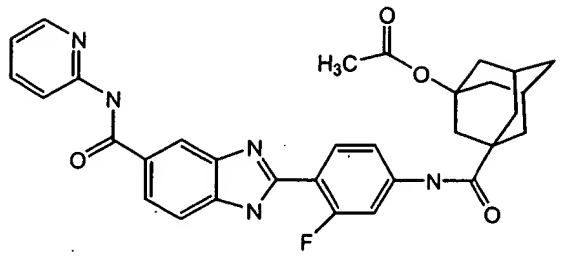
I.185

46. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



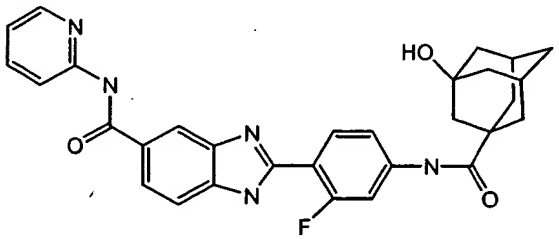
I.188

47. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



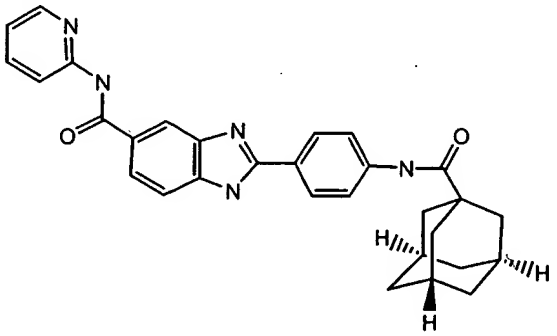
I.189

48. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



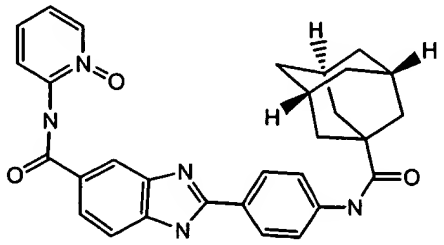
I.190

49. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



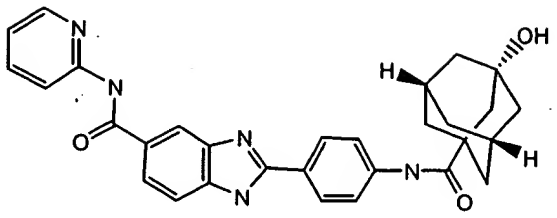
I.82

50. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



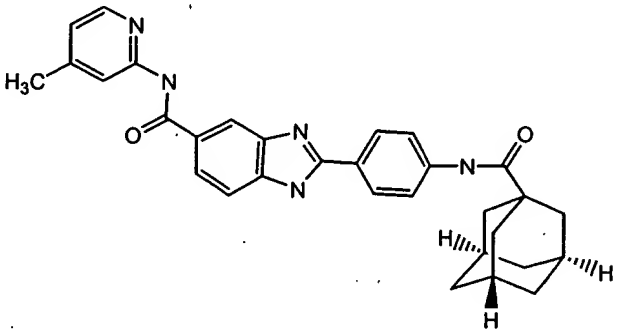
I.158

51. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



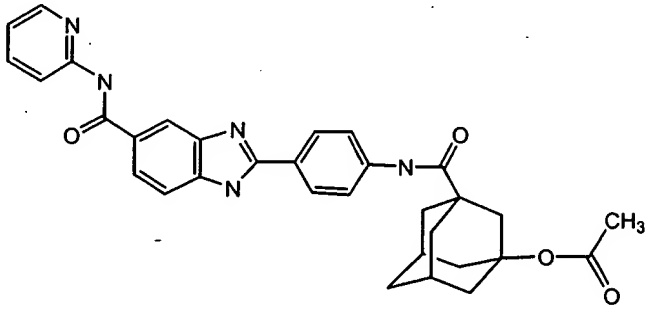
I.172

52. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



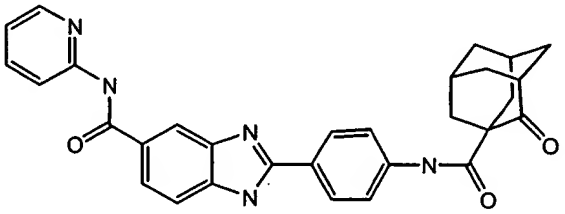
I.173

53. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



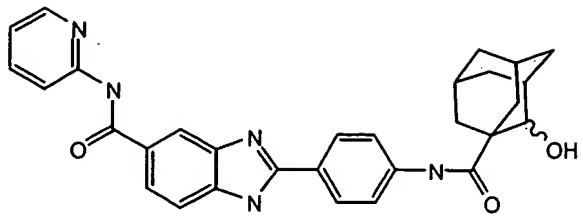
I.186

54. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



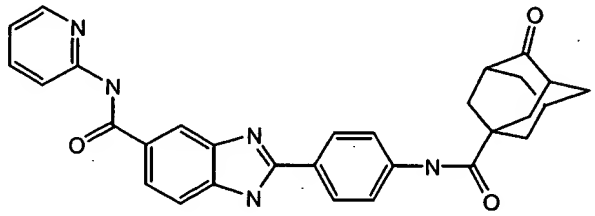
I.191

55. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:

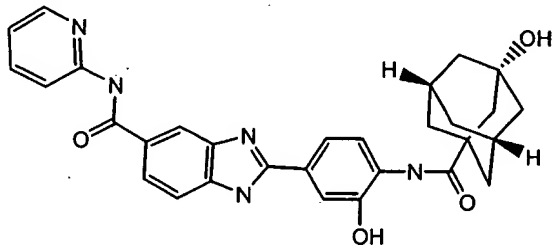


I.192

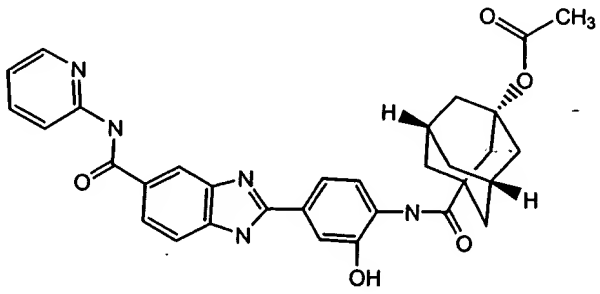
56. **(Previously Added)** A pharmaceutical composition comprising a compound represented by the formula below:



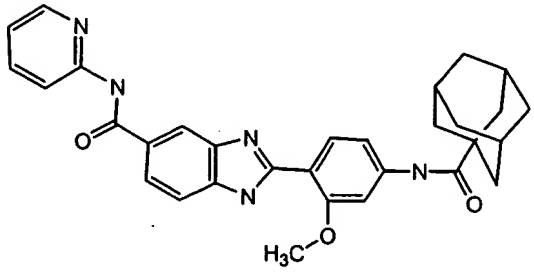
57. **(Previously Added)** A pharmaceutical composition comprising a compound selected from the group consisting of:



I.170,



I.171,



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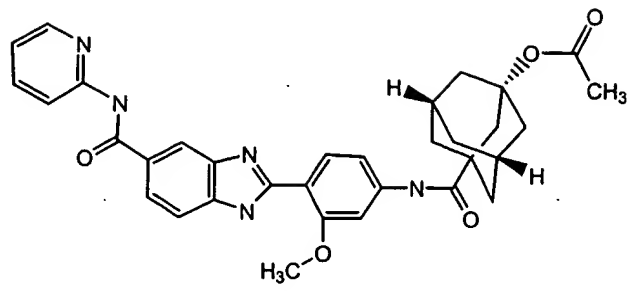

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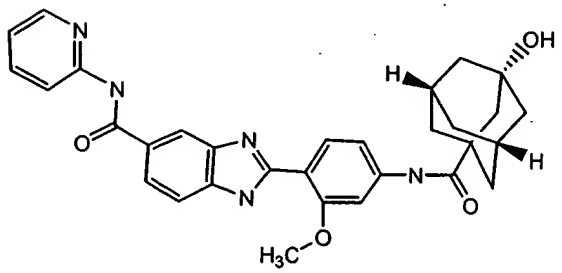

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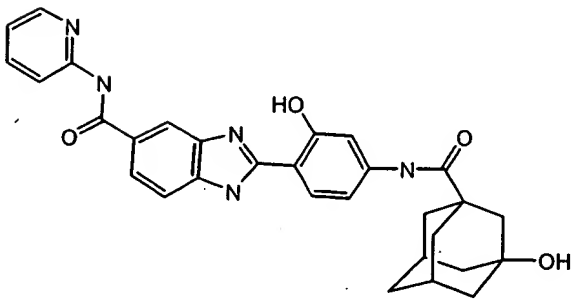
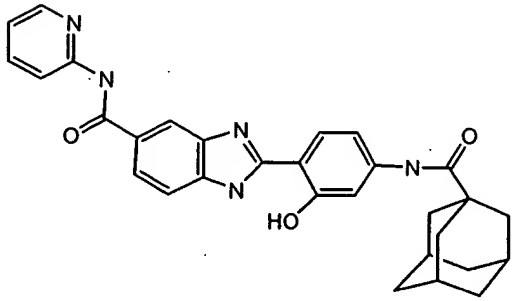


I.178

, and



I.181

58. (New) The compound of Claim 1, wherein said heteroaryl and said substituted heteroaryl is selected from the group consisting of pyridines, thiazoles, isothiazoles, oxazoles, pyrimidines, pyrazines, furans, thiophenes, isoxazoles, pyrroles, pyridazines, 1,2,3-triazines, 1,2,4-triazines, 1,3,5-triazines, pyrazoles, imidazoles, indoles, quinolines, iso-quinolines, benzothiophines, benzofurans, parathiazines, pyrans, chromenes, pyrrolidines, pyrazolidines, imidazolidines, morpholines, thiomorpholines, and the corresponding heterocyclics.

REMARKS

Claims 1 and 38 are currently amended. Claims 3-4, 6-11, 13-25, 29-34, 36-37 and 41 have been canceled without prejudice, and new Claim 58 has been added. As a result, Claims 1, 2, 5, 12, 26-28, 35, 38-40, and 42-58 are presently pending. Support for the amendments can be found in the specification and claims as filed, as detailed below. Accordingly, the amendments do not constitute the addition of new matter. Reconsideration of the application in view of the foregoing amendments and following comments is respectfully requested.

Objections under 35 U.S.C. § 132

The Examiner objected to the amendment filed March 12, 2003 under 35 U.S.C. § 132 for introducing new matter into the disclosure. The amendment filed on March 12, 2003 added to Claim 1, the negative limitation "...wherein R′ is not haloalkyl." Applicants had added this limitation to exclude the compositions of Matsunaga, in which reference it was disclosed that the haloalkyl moiety was required to produce the desired DNA alkylating activity. None of Applicants' hundreds of compounds include an R′ which is a haloalkyl. Thus, Applicants derived support from the extensive disclose, which uniformly lacked an R′ as haloalkyl. However, in order to further prosecution, Applicant has now deleted this limitation. Accordingly, the new matter objection is moot.

The Examiner also objected to the added material regarding the R's, X and Y substituents being OCOR′, carbonyl, or OCOR′′. Amended Claim 1 now recites *inter alia* "wherein the substituent on R_1, R_2, and R′ is selected from the group consisting of ...carbonyl, ...OCOR′, ...; wherein X and Y are independently selected from the group consisting of ...OCOR′...". The substituent OCOR′′ was replaced in the current amendment by OCOR′. Support for these amendments can be found in the compounds disclosed throughout the specification which include such substituents. More particularly, with respect to the R substituents including carbonyl, compound I.191 as originally disclosed has a carbonyl substituent on the adamantyl ring—thereby providing support for R′ being carbonyl. With respect to the R substituents including OCOR′, compounds I.170, I.175, I.180, I.182, I.185, I.186, I.187 and I.189 all support the definition of the substituents on R_1, R_2, and R′ as being OCOR′. With the current amendment to Claim 1, the definition of X and Y substituents is amended to replace OCOR′′ with OCOR′. Support for this amendment can be found in compound I.179, in which Y is

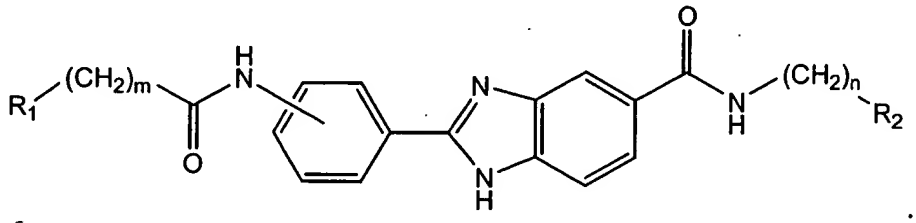
OCOR′ (OCO-adamantyl). Accordingly, Applicants respectfully request withdrawal of the Examiner's new matter objections under 35 U.S.C. § 132.

In the Office Action dated April 24, 2003, the Examiner also objected "numerous method of treating claims which are drawn to non-elected group since the examiner had restricted it to *a* (one) method of treating." Accordingly, Applicants have canceled the method of treating claim, Claim 41, which was directed to a non-elected group (method of treating cellular cell proliferation). Applicants respectfully point out that the only other added method of treating claims, Claims 39 and 41, are in fact directed to the elected method of treating allergies, asthma.

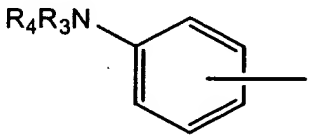
Rejection under 35 U.S.C. § 102

The Examiner rejected Claims 1-3 and 26-28 under 35 U.S.C. § 102(b) as being anticipated by Matsunaga et al. (EP 0719765; US 5,821,258).

Matsunaga et al. disclose compounds that are useful as anticancer, antiviral or antimicrobial agents, by virtue of their ability to act on DNA. A broad genus of compounds are disclosed having the formula:



All the specific compounds disclosed in Matsunaga et al. have at least R_1 or R_2 as



wherein R_3 and R_4 are haloalkyl. In fact, it is necessary for the compounds of Matsunaga et al. to have a bis(2-chloroethyl)amino moiety, or comparable alkylating functionality, in order for the compounds to exhibit the desired activity. The entire Background section is directed to agents that interact with DNA, thereby functioning as an anticancer agent. Moreover, to elaborate on the structure capable of acting on DNA, Matsunaga et al. disclose that bis(2-chloroethyl)amino residue has been used as an alkylating agent in anticancer drugs, "[h]owever, the merit of adding the alkylating agent having a chloroethylamine structure as a partial structure

of the anticancer agent which bonds to DNA has scarcely been recognized so far." (Col. 1, lines 45-57). As mentioned above, all of the specific compounds disclosed by Matsunaga et al. include this bis(2-chloroethyl)amino moiety.

In the Summary of the Invention (see e.g., Col. 2, lines 34-37), Matsunaga et al. disclose that "an object of the present invention is to provide a novel compound which acts on DNA, or a novel compound which has a partial structure capable of acting on DNA and which is useful as the anticancer agent." See also the concluding paragraph of the Summary (Col. 3, lines 21-23) stating that "[t]he compound of the present invention acts on DNA, and so it is useful as an active ingredient of an anticancer agent, an antiviral agent or an antimicrobial agent."

Further, throughout the Detailed Description, it is clear that the invention of Matsunaga et al. is directed to DNA-interacting, anticancer agents. See e.g., Col. 24, lines 41-43, stating that "[t]he side effect of the compounds according to the present invention is at such a level as to be acceptable as the anticancer agents." Moreover, the only activity disclosed for any of the compounds of Matsunaga et al. relates to DNA binding and anticancer activity (see e.g., Test Examples 1-3). Thus, Applicants respectfully assert that one of skill in the art would understand that the teaching of Matsunaga et al. focus on a class of compounds having a chloroethylamine residue on a benzimidazole core, which compounds are designed to interact with DNA and thereby provide an anticancer effect.

It is also noted that Matsunaga et al. fail to disclose any of Applicants' compounds, none of which incorporate a chloroethylamine residue, or any other DNA alkylating moiety. Thus, Applicants suggest that while the extremely broad genus of Matsunaga et al. (e.g., where R_1 and R_2 are independently a substituted phenyl or substituted heterocyclic— as disclosed e.g., at Col. 2, lines 53-56) may encompass some of Applicants' compounds, the genus nonetheless fails to anticipate either of Applicants' amended genus claims (Claims 1 and 38), or any of the novel species recited by Applicants.

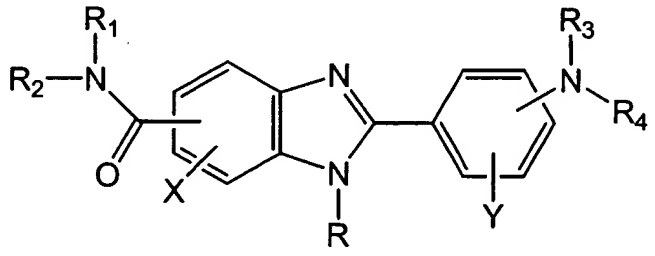
According to M.P.E.P. § 2131.02, "when the compound is not specifically named, but instead it is necessary to select portions of teaching within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated." Furthermore, § 2131.02

also provides that "one may look to the preferred embodiments to determine which compounds can be anticipated."

To arrive at a compound of Applicants' Claim 1 from Matsunaga et al., one would have to select portions of teachings of Matsunaga et al. and combine them. However, in Matsunaga et al., the list of substituents is not sufficiently limited or well delineated. Indeed, the number of possible compounds included in the generic formula of Matsunaga et al. is so vast that it would be essentially impossible to draw a structural formula or write the name of each, let alone to select Applicants' compounds. Therefore, it is respectfully asserted that the generic formula of Matsunaga et al. cannot anticipate amended Claim 1.

Furthermore, when a generic structure is disclosed in a reference, one may look to the preferred embodiments to determine which compounds can be anticipated. As mentioned above, Matsunaga et al. discloses only compounds with the bis(2-chloroethyl)amino residue because the bis(2-chloroethyl)amino residue is required for the DNA-alkylating function of the compounds. Hence, one of ordinary skill in the art would not be able to envision compounds of Applicants' Claim 1 from the generic chemical formula of Matsunaga et al., in view of the essential functional moiety (bis(2-chloroethyl)amino) included in all of Matsunaga's preferred compounds.

As amended, the generic compound recited in Claim 1 has NO overlap with the chloroethylamine compounds taught by Matsunaga et al. The genus recited in Claim 1 has been amended to delete NR′R′ as a substituent on R_1, R_2, and R′. Now amended Claim 1 recites a compound having the formula:



Genus I;

wherein R is selected from the group consisting of H, C_1-C_5 alkyl, benzyl, p-fluorobenzyl and di-alkylamino alkyl, wherein said C_1-C_5 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl;

wherein R_1 and R_2 are independently selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatic groups, substituted polycyclic aliphatic groups, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur;

wherein R_3 and R_4 are independently selected from the group consisting of H, alkyl, aryl, heteroaryl and COR′;

wherein R′ is selected from the group consisting of H, alkyl, substituted alkyl, C_3-C_9 cycloalkyl, substituted C_3-C_9 cycloalkyl, polycyclic aliphatics, substituted polycyclic aliphatics, phenyl, substituted phenyl, naphthyl, substituted naphthyl, heteroaryl and substituted heteroaryl, wherein said heteroaryl and said substituted heteroaryl contain 1-3 heteroatoms, wherein said heteroatom is independently selected from the group consisting of nitrogen, oxygen and sulfur;

wherein the substituent on R_1, R_2, and R′ is selected from the group consisting of H, halogens, polyhalogens, alkoxy group, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, carbonyl, OH, OCH_3, COOH, OCOR', COOR′, COR′, CN, CF_3, OCF_3, NO_2, NHCOR′ and CONR′R′;

wherein X and Y are independently selected from the group consisting of H, halogens, alkoxy, substituted alkoxy, alkyl, substituted alkyl, dialkylaminoalkyl, hydroxyalkyl, OH, OCOR′, OCH_3, COOH, CN, CF_3, OCF_3, NO_2, COOR′′, CHO and COR′′; and

wherein R′′ is a C_1-C_8 alkyl, wherein said C_1-C_8 alkyl is selected from the group consisting of a straight chain, branched or cyclic alkyl;

wherein at least one of R_1, R_2, R_3, or R_4 is not H.

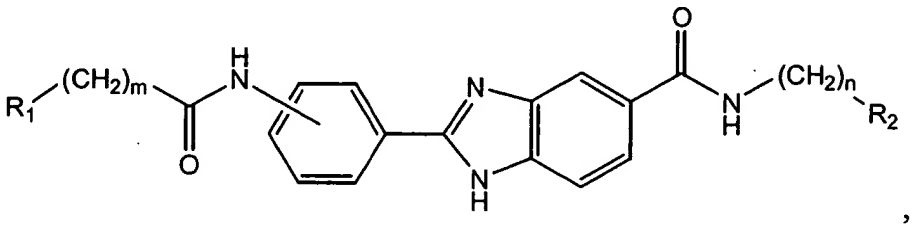
Accordingly, the genus recited by Claim 1 does not cover compounds having a bis(2-chloroethyl)amino residue as it would necessarily be an NR′R′ substituent under Applicants' definition of the genus. Applicants' therefore respectfully assert that Matsunaga et al. cannot anticipate the compounds of amended Claim 1.

Applicants therefore respectfully request withdrawal of the rejections under 35 U.S.C. § 102(b) based upon this reference.

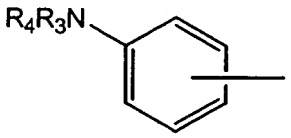
Rejection under 35 U.S.C. § 103

The Examiner rejected Claims 1-3 and 26-28 under 35 U.S.C. § 103(a) as being obvious over EP 0719765 (also Matsunaga et al. U.S. Patent No. 5,821,258).

The Examiner states that EP 0719765 discloses pharmaceutical compositions shown below:



such that certain variations would result in compositions of the claimed invention. As detailed above, Matsunaga et al. disclose the above compounds for use as anticancer, antiviral, or antimicrobial agents. All the compounds specifically disclosed in Matsunaga et al. include at least R_1 or R_2 as



wherein R_3 and R_4 are haloalkyl. Further, as discussed above, the bis(2-chloroethyl)amino residue is essential for the compounds of Matsunaga et al. to exert their asserted activities. According to M.P.E.P. § 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Furthermore, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended use, then there is no suggestion or motivation to make the proposed modification.

Since the compounds of Matsunaga et al. require the bis(2-chloroethyl)amino residue for their DNA-alkylating activity, one of ordinary skill in the art would not be motivated to modify the compounds of Matsunaga et al. to remove the bis(2-chloroethyl)amino residue. As detailed

above with regards to the rejection under 35 U.S.C. § 102, the compounds of amended Claim 1 do not include the bis(2-chloroethyl)amino residue. Therefore, a proposed modification of the compounds of Matsunaga et al. to produce compounds of Claim 1 would require removal of the bis(2-chloroethyl)amino residue. Since the proposed modification of removal of the bis(2-chloroethyl)amino residue would render the invention of Matsunaga et al. unsatisfactory for its intended use (i.e. interacting with DNA), there is no suggestion or motivation to make the proposed modification. Accordingly, there is no case of *prima facie* obviousness.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection under 35 U.S.C. § 103(a).

New Claim

Claim 58 has been added and is directed to substituents for the compounds of Claim 1. Claim 58 is formerly Claim 3, but is now being reinstated.

Allowed Claims

In the Office Action of November 7, 2002 (Paper 10, page 6), the Examiner acknowledged that claims drawn to the method of treating allergy and/or asthma using compounds of preferred embodiments in the elected group are found to be allowable since none of the prior art references teach using the compounds for treating allergies or asthma. In the same paragraph, the Examiner also indicated that the method of making Applicants' compounds (Claim 35) was also allowable, as the prior failed to teach use of benzaldehyde. Therefore, Applicants respectfully assert that Claims 5, 12, and 35 are allowable, as acknowledged previously by the Examiner.